APPENDIX D

Environmental and Construction Compliance Monitoring Plan

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Environmental and Construction Compliance Monitoring Plan
Tule Wind Project

Lead Agency:

United States Department of the Interior
Bureau of Land Management

Environmental Impact Statement 20110347
Case File Number: CACA-49698

Tule Wind Project
Decision to Grant Right-of-Way

United States Department of the Interior, Bureau of Land Management
El Centro Field Office
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DRAFT

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LIST OF ACRONYMS AND ABBREVIATIONS	
Acronym/Abbreviation	**Term**
BLM	Bureau of Land Management
CALFIRE	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CM	compliance manager
ECCMP	Environmental and Construction Compliance Monitoring Plan
ECO	East County
EI	environmental inspector
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FEIR	Final Environmental Impact Report
FLPMA	Federal Land Policy and Management Act
I-	Interstate
LIDAR	light detection and ranging
MW	megawatt
NTP	Notice to Proceed
O&M	operations and maintenance
POD	Plan of Development
ROD	Record of Decision
ROW	right-of-way
SDG&E	San Diego Gas & Electric
SODAR	sonic detection and ranging
TSD	Treatment, Storage, and Disposal
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

1. INTRODUCTION

1.1 Background

The U.S. Bureau of Land Management (BLM) may issue a right-of-way (ROW) grant authorizing the construction, operation, maintenance, and decommissioning of the Tule Wind Project to the applicant, Tule Wind, LLC. The ROW will be issued for a term of 30 years with a right of renewal in accordance with 43 CFR 2807.22. The ROW grant will allow Tule Wind, LLC the right to use, occupy, and develop public lands to construct, operate, maintain, and decommission a wind energy facility with up to 65 wind turbines generating up to 195 megawatts (MW) of electricity in southeastern San Diego County. The project site is located approximately 70 miles east of downtown San Diego, north of Interstate 8 (I-8) and the town of Boulevard, in San Diego County, California, within Townships 15, 16, and 17 South, Ranges 6 and 7 East. The Tule Wind Project would be primarily located in the In-Ko-Pah Mountains near the McCain Valley in southeastern San Diego County. Under the BLM's Selected Alternative, the project would be located on lands managed by the BLM and private land under the jurisdiction of San Diego County.

In addition to the 65 wind turbines, the other main features of the project include new and existing access roads; associated transmission lines including overhead and underground collector lines and a 138 kV gen-tie; three meteorological towers; a sonic detection and ranging (SODAR) or light detection and ranging (LIDAR) unit; a collector substation; an operations and maintenance (O&M) facility; temporary construction laydown/staging areas; and groundwater wells used for water supply. The gen-tie would extend south from the project site and across I-8, and would connect to the proposed Boulevard Substation rebuild component of San Diego Gas & Electric's (SDG&E's) East County (ECO) Substation Project. SDG&E's ECO Substation Project is analyzed in Sections D.2 through D.18 of the Final Environmental Impact Statement/Environmental Impact Report (FEIS/FEIR) for the Tule Wind Project (CPUC and BLM 2011). Direct, indirect, and cumulative impacts of the construction, operation, and maintenance of the proposed project are addressed in the FEIS/FEIR.

1.2 Purpose

The BLM requires holders of ROW grants to prepare and fund an environmental and construction compliance monitoring program to ensure compliance with the BLM terms, conditions, and stipulations in the ROW grants, the Plan of Development (POD), and required mitigation as provided for in the Record of Decision (ROD, listed in further detail in Section 2).

The purpose of this plan is to address the requirement to develop an environmental and construction compliance monitoring plan for the Tule Wind Project covering both construction and operation. In addition, the applicant will establish a "Compliance Monitoring Team," which will include a compliance manager (CM), construction monitors, environmental inspectors, and a designated biologist. A qualified individual would be designated to serve as the CM. The Compliance Monitoring Team would be responsible for development and implementation of the Tule Wind Project's compliance program. They would be responsible for communication

and coordination with the applicable regulatory agencies and ensuring compliance with the various conditions and requirements of the full range of project permits and approvals. They would be responsible for the necessary record keeping and reporting required by Tule Wind Project permits. They would ensure that all applicable plans are up to date. The CM's role would include advising BLM and project management of actual and potential compliance/non-compliance issues and for ensuring that project planning takes appropriate account of compliance issues in advance.

This Environmental and Construction Compliance Monitoring Plan (ECCMP) includes the following:

- Description of the responsibilities of the Compliance Monitoring Team, including the CM hired to report findings to the BLM
- The level of effort anticipated from the Compliance Monitoring Team in implementing this ECCMP
- Definition of the decision-making authority of the Compliance Monitoring Team
- Description of the Compliance Monitoring Team's participation in the applicant's Worker Environmental Awareness Program (WEAP)
- Descriptions of the responsibilities of the CM, construction monitors, environmental inspectors, and designated biologist.

This report also discusses the monitoring, reporting, and documentation requirements, stop work authority, and the variance process.

Appendices to this document are as follows:

- Appendix A: Monitoring Report Cover Page Form
- Appendix B: Monitoring Report Form
- Appendix C: BLM Authorized Officer Report
- Appendix D: Certification of Completion of Worker Environmental Awareness Program
- Appendix E: Variance Request Form
- Appendix F: Summary of Bureau of Land Management Mitigation and Monitoring.

2. OBJECTIVES OF THE ENVIRONMENTAL AND CONSTRUCTION COMPLIANCE MONITORING PLAN

The overall objective of the ECCMP is to provide direction for the Compliance Monitoring Team on conducting inspections, to evaluate compliance or noncompliance with the project measures and conditions during project construction, and document compliance or noncompliance. This ECCMP focuses on both construction and operation phases of the Tule Wind Project.

The environmental mitigation requirements for the applicant comprise the following:

- Mitigation measures, project design features, and other measures documented in the FEIS/FEIR to be included in the ROD
- Terms, conditions, and stipulations in the ROD, ROW grant, and Notices to Proceed for the project
- Construction procedures and mitigation measures in the approved POD for the project
- Stipulations, terms, conditions, and other measures from other authorizing federal agencies' permits and approvals
- Stipulations, terms, conditions, and other measures from state and regional agencies' permits and approvals.

During construction of the Tule Wind Project, the environmental inspectors will conduct inspections of construction activities and the implementation of the required mitigation measures, and will provide regular feedback through the construction monitors to the CM on compliance issues to the BLM. The CM will involve other agencies, such as the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG) in the monitoring and documenting of environmental compliance to the extent requested by those agencies and authorized by the BLM. The CM will provide BLM with weekly status updates on the construction and monitoring efforts and will provide BLM with copies of the quarterly monitoring reports and the final monitoring report. Construction progress and environmental compliance will be tracked and documented in quarterly reports prepared and submitted as described in detail in Section 4, Reporting and Documentation. The construction monitors will report directly to the CM. The CM will report directly to the BLM compliance project manager (or authorized officer) and other identified compliance contacts as directed by the BLM. Dudek Environmental and Engineering (DUDEK) will serve as the BLM's designated CM.

Other objectives of the ECCMP are to:

- Facilitate the timely resolution of compliance-related issues in the field
- Provide continuous information to the BLM and other agencies and parties as authorized regarding noncompliance issues and their resolution

- Review, process, and track construction-related changes to project plans (as described in Section 5, Variances, the CM will assist with implementation of the variance process in accordance with a predetermined level of decision-making authority granted by the BLM)
- Develop and implement a system for storing the information collected during the ECCMP in a format that will allow easy retrieval and search functions.

The construction monitor, DUDEK, will conduct review and inspection of the design and construction of the project for compliance with applicable laws, ordinances, regulations, and standards related to environmental resources and will be responsible for reporting compliance to CM.

In addition to the BLM, several local, state, and federal agencies have jurisdiction over lands within the project area. The BLM, as the lead agency, is responsible for ensuring that mitigation measures reviewed and approved by the BLM during the Draft EIR/EIS process are implemented throughout construction. Other jurisdictional agencies are required to ensure compliance with their respective measures under their jurisdiction and may visit the project site from time to time and request information regarding the status of a mitigation measure. Tule Wind, LLC is responsible for satisfying requests from jurisdictional agencies and will notify and copy the BLM on all correspondences related to final approvals and verifications for the project if not otherwise copied on the correspondence. The following lists the most significant environmentally related federal, state, and local project permits and approvals and rules.

Federal permits, approvals, and authorizations:

- Federal Land Policy and Management Act (FLPMA) ROW Grant (lead agency, BLM)
- Endangered Species Act (16 U.S.C. 1531–1544), Migratory Bird Treaty Act, Bald and Golden Eagle Protection Acts, Section 7 Consultation, Consultation (Migratory Bird Treaty Act and Bald and Golden Eagle Protection Acts) (lead agency, USFWS)
- National Historic Preservation Act Section 106 Compliance (lead agency, BLM)
- Clean Water Act Section 104 Nationwide Permit (lead agency, U.S. Army Corps of Engineers)
- Form 7460-1 (Federal Aviation Administration).

State permits, approvals, and authorizations:

- Section 1601 Streambed Alteration Agreement process under the California Fish and Game Code (lead agency, CDFG)
- Encroachment and Transportation Permits, California streets and highways Code 660-711.21 CCR 1411.1-1411.6 (lead agency, California Department of Transportation)

- Environmental Protection Agency (EPA) Hazardous Waste Generator ID, 90 days Treatment, Storage, and Disposal (TSD) Permit; Hazardous Material Business Plan (lead agency, California Department of Toxic Substance Control)
- Clean Water Act, Sections 401 and 402, Porter-Cologne Water Quality Control Act, California Water Code, Division 7. Water Quality 401 Certification, Stormwater Construction General Permit 99-08-DWQ, NPDES Permit, WDRs (lead agency, state/ Regional Water Quality Control Board)
- Public Resource Code 4125-4128, and CCR Title 14 Division 1.5 Chapter 7, Subchapter 2, Articles 1–5, Concurrence with Fire District approval of project Fire Protection Plan (lead agency, California Department of Forestry and Fire Protection (CALFIRE)).

Local permits, approvals, and authorizations:

- Major Use Permit (lead agency, San Diego County)
- Hazardous Materials Business Plan and Hazardous Materials Inventory, Health and Safety Code Chapter 6.95 (lead agency, San Diego County Environmental Health Services)
- Fire District Approval and Fire Service Agreement (lead agency, San Diego Rural Fire Protection Districts and San Diego County Fire Authority).

3. ENVIRONMENTAL COMPLIANCE MONITORING AND MANAGEMENT

3.1 Construction Plan

In the event the BLM approves the Tule Wind Project, a ROW grant will be issued to the applicant. The applicant has filed an application with the BLM for a ROW grant pursuant to the FLPMA. Under FLPMA, Title V (Rights-of-Way), the United States Secretary of the Interior is authorized to grant ROWs for the purpose of allowing systems for generation, transmission, and distribution of electric energy.

The project site is located approximately 70 miles east of downtown San Diego, north of (I-8 and the town of Boulevard, in San Diego County, California, within Townships 15, 16, and 17 South, Ranges 6 and 7 East. The Tule Wind Project would be primarily located in the In-Ko-Pah Mountains near the McCain Valley in southeastern San Diego County. Under the BLM's Selected Alternative, the project would be located on lands managed by the BLM and private land under the jurisdiction of San Diego County.

The ROW grant will allow Tule Wind, LLC the right to use, occupy, and develop the described public lands to construct, operate, maintain, and decommission a wind energy facility with up to 65 wind turbines generating up to 195 MW of electricity in southeastern San Diego County. In addition to the 65 wind turbines, the other main features of the project include new and existing access roads; associated transmission lines including overhead and underground collector lines and a 138 kV gen-tie; three meteorological towers; a SODAR or LIDAR unit; a collector substation; an O&M facility; temporary construction laydown/staging areas; and groundwater wells used for water supply. The gen-tie would extend south from the project site and across I-8, and would connect to the proposed Boulevard Substation rebuild component of SDG&E's ECO Substation Project.

Project construction is expected to begin in 2012 and is anticipated to require 12 months to complete. The development of the project is outlined in the BO provided in Appendix A of the ROD and in the POD on file with the BLM. Commercial operation could commence as early as 2014.

3.2 Compliance Monitoring and Management

This section describes the roles and responsibilities of key project personnel with respect to the ECCMP. The BLM's compliance representatives for the project are as follows:

- BLM Authorized Officer: the BLM El Centro Field Office official with the administrative authority for the ROW grant issuance and authority for accepting and approving project-related changes.
- BLM Compliance Project Manager: staff-level position designated by the BLM authorized officer as the point of contact for all compliance issues.

- Compliance Manager: point of contact position for all compliance-related issues; reports to the BLM authorized officer or the designated BLM compliance project manager for all compliance-related issues.
- Field Director: The Field Director will be responsible for supervising the construction monitors/designated biologists and monitoring the environmental inspectors. The Field Director will also be responsible for reviewing work progress and schedules related to construction monitors/designated biologists.
- Construction Monitors/Designated Biologists: Construction monitoring personnel responsible for observing and reporting compliance with the terms and conditions of the BLM ROW authorization for all phases of project construction will report to the construction manager. In instances of monitoring related to biological resources, the designated biologists will be BLM-approved (and in some instances require additional approval).

The applicant's compliance team will consist of the following personnel:

- Environmental Inspectors: on-the-ground compliance personnel responsible for implementing the compliance program dictated under the terms and conditions of the BLM ROW authorization for all phases of project construction.
- Compliance Lead: The applicant will assign a Compliance Lead who will be responsible for providing the appropriate level of resources for successful implementation of the ECCMP. The Compliance Lead is responsible for directing the development and implementation of the preconstruction environmental planning, permitting, and compliance activities, environmental inspection program, and environmental training.

The CM will enter into a contract for the project with the applicant for the payment of the BLM compliance monitoring services provided.

3.2.1 Applicant Contacts

The following are contact persons for the construction of the Tule Wind Project:

- Jeffrey Durocher, Iberdrola Renewables, Wind Permitting Manager, 503.796.7781 (Jeffrey.Durocher@iberdrolaren.com)
- Construction Project Manager, Iberdrola Renewables, point of contact to be determined.
- Construction Site Manager, Iberdrola Renewables, point of contact to be determined.

3.2.2 Compliance Manager

The CM for the Tule Wind Project will oversee management of the ECCMP, prepare project materials, participate in any BLM preconstruction meetings; participate in or conduct the applicant's WEAP (WEAP may also be conducted by the designated biologist); supervise the monitoring activities, materials, and schedules; supervise the construction monitors/designated biologists; monitor the environmental inspectors, provide guidance on and review of compliance issues; review and process variance requests; and review, provide weekly status updates, and distribute quarterly reports.

Specific compliance monitor responsibilities are as follows:

- Report directly to the BLM compliance project manager or BLM authorized officer or other designated BLM compliance contacts
- Participate in the preconstruction meeting
- Participate in and/or conduct the WEAP kick-off meeting
- Verify the applicant's, compliance with the project environmental requirements
- Supervise the monitoring activities, materials, and schedules
- Supervise the construction monitors/designated biologists
- Ensure that all reported noncompliance is tracked for resolution by the applicant
- Review, approve, and distribute monitoring reports, correspondence, and scope of work and schedule changes
- Review work progress, schedules, and budgets related to compliance monitoring activities
- Confer with the BLM compliance project manager and compliance contacts on a regular basis
- Serve as the contact between BLM and the applicant, for compliance issues
- Serve as BLM's representative to permitting agencies, private landowners, and special interest groups regarding the environmental mitigation efforts on the project
- Coordinate with the BLM and other agencies, as determined necessary, on reviewing and approving variance requests.

3.2.3 Construction Monitors/Designated Biologists

The construction monitor will supervise sufficient full-time on-the-ground construction monitors/designated biologists during construction of all phases of the project. The number of construction monitors/designated biologists will be determined based on the specific activities during each construction phase. Specifically, the need for the full-time construction

monitors/designated biologists may be re-evaluated throughout the construction phase and a schedule adjusted, as necessary, as conditions demand.

During construction, many factors may affect the specific deployment of the construction monitors/designated biologists. These include the activity occurring at specific times of inspection, any noncompliance or problem areas documented during previous inspections by the construction monitors/designated biologists, site-specific conditions at the time of construction, skill levels and attitudes of the contractor crews and foremen, and the number of inspection team members.

The construction monitor's planned monitoring coverage assumes that the construction contractors will demonstrate a high level of environmental compliance, and that the applicant's environmental inspectors (EIs) will be qualified and experienced.

The construction monitor will regularly evaluate the effectiveness of the environmental compliance monitoring in consultation with the BLM and Compliance Contacts to ensure adequate staffing. If determined necessary, the construction monitor will provide additional, adequately trained support staff to act as construction monitors/designated biologists on an as-needed basis.

The primary responsibility of the construction monitors/designated biologists will be to monitor and document the applicant's construction, compliance, and/or noncompliance with the project building, engineering, installation, and environmental requirements. The construction monitors/designated biologists will also review and approve variance requests, as appropriate to their authority level, for implementation of limited variations from mitigation measures previously agreed to by the applicant or stipulated by other agencies (refer to Section 5, Variances).

Prior to the start of construction, the construction monitors/designated biologists will become familiar with the applicant's design review and approval, environmental compliance management program, participate in the preconstruction meeting, participate in the WEAP, and receive additional training as needed from the construction monitor, as needed. The construction monitors/designated biologists will become familiar with the roles and responsibilities of the applicant's field team(s), EIs, the required building codes, fire codes, construction documents, other relevant building standards, environmental reporting responsibilities, and the chain of communication. It is assumed that the applicant will provide the construction monitors/designated biologists and the construction monitor with copies of all permit requirements for the project prior to initiation of construction.

At a minimum, the construction monitors/designated biologists will maintain contact with the applicant staff. Construction activities will be inspected by the construction monitors/designated biologists and environmentally sensitive areas will be regularly inspected to ensure protection of the identified resources.

The construction monitors/designated biologists will communicate with the applicant's compliance staff on a regular basis. This approach will allow the applicant's inspectors and the construction monitors/designated biologists to exchange information on the status of construction and to discuss any significant construction events scheduled over the next 2 or 3 days. The construction monitors/designated biologists may inspect all activities either with the applicant's inspectors or independently. The construction monitors/designated biologists will have the authority to order the halt of a specific noncompliance activity that is damaging, has the potential to damage a sensitive environmental resource, or is not being performed according to building and construction standards.

The construction monitors will record observations, including digital photo documentation at each location visited. This process will ensure consistent and accurate reporting of site conditions at the time of inspection. Each activity monitored will be assigned a compliance level and documented in a quarterly report (refer to Section 4.3, Quarterly Monitoring Reports).

3.2.4 Designated Biologists-Specific Tasks

3.2.4.1 General

BLM approval will be obtained for the designated biologists responsible for conducting construction monitoring during all construction activities to ensure that construction activities are contained within the staked and flagged construction areas at all times. The construction monitor shall also be present during all ground disturbing activities. The Designated Biologist will have the authority to stop work and report directly to the construction monitor to ensure compliance with the Project Description, applicant-proposed measures, and mitigation measures. The Designated Biologist will also provide the construction monitor with weekly updates and quarterly monitoring reports. After construction has been completed, the construction monitor will provide the construction monitor with a final monitoring report. The construction monitor will provide BLM with weekly status updates on the status of construction and monitoring efforts and will provide BLM with copies of the quarterly monitoring reports and the final monitoring report. BLM shall be responsible for ensuring that construction monitoring is conducted during all construction activities.

3.2.5 Communication

Communication is a critical component of a successful environmental compliance program. In order to avoid project delays and possible shut-downs, environmental and construction representatives will need to interact regularly and maintain professional, responsive communications at all times. Similarly, Tule Wind, LLC representatives will need to coordinate closely with BLM monitors to address and resolve issues in a timely manner. Therefore, this section provides a communication protocol to accurately disseminate information on ongoing surveys and mitigation measures, construction activities, contractors, and planned or upcoming work to all levels of the project.

Pre-Construction Kick-Off Meeting

A pre-construction meeting will be held with the BLM, Tule Wind, LLC, and BLM environmental monitors to review the ECCMP and mutually agree on the project's communication protocol.

Construction Progress Meetings

It is expected that Tule Wind, LLC will conduct construction progress field meetings with construction managers, contract administrators, and environmental representatives as needed to ensure compliance with the ECCMP.

Daily Communication

Many of the problems that come up during construction can be resolved in the field through regular communication between BLM environmental monitors, Tule Wind, LLC, and construction contractors. Field staff will be equipped with cell phones and available to receive phone calls at all times during construction. The organization chart depicted in Figure 1 generally shows the lines of communication to be used during construction. The following provides additional guidelines to ensure effective communication in the field:

BLM Environmental Monitors

The BLM Environmental Monitors' primary point of contact with Tule Wind, LLC in the field is the Tule Wind, LLC Compliance Lead. The BLM Environmental Monitors will contact Tule Wind's Compliance Lead if an activity is observed that conflicts with one or more of the mitigation measures, so that the situation can be corrected. If the BLM Environmental Monitors cannot immediately reach the Tule Wind, LLC Compliance Lead, then the Tule Wind, LLC Environmental Monitor or Tule Wind, LLC Environmental Manager will be contacted to address the problem. Similarly, BLM Environmental Monitors will contact the Tule Wind Environmental Monitor for information on where construction crews are working, the status of mitigation measures, and schedule forecasts. The BLM Environmental Monitors will not direct the contractor; however, the BLM Environmental Monitors have the authority to stop work, assuming it is safe to do so, if an activity poses an imminent threat or puts a sensitive resource at undue risk (e.g., stopping a clearing crew from unknowingly cutting sensitive habitat in an exclusion area).

Tule Wind, LLC

Tule Wind, LLC will provide the BLM Environmental Monitors with a list of construction monitoring personnel and construction supervisory staff to contact regarding compliance issues. The contact list will include each person's title, responsibility, and whether their position is segment-specific. The contact list will be updated as new project personnel are assigned to the project and redistributed as necessary.

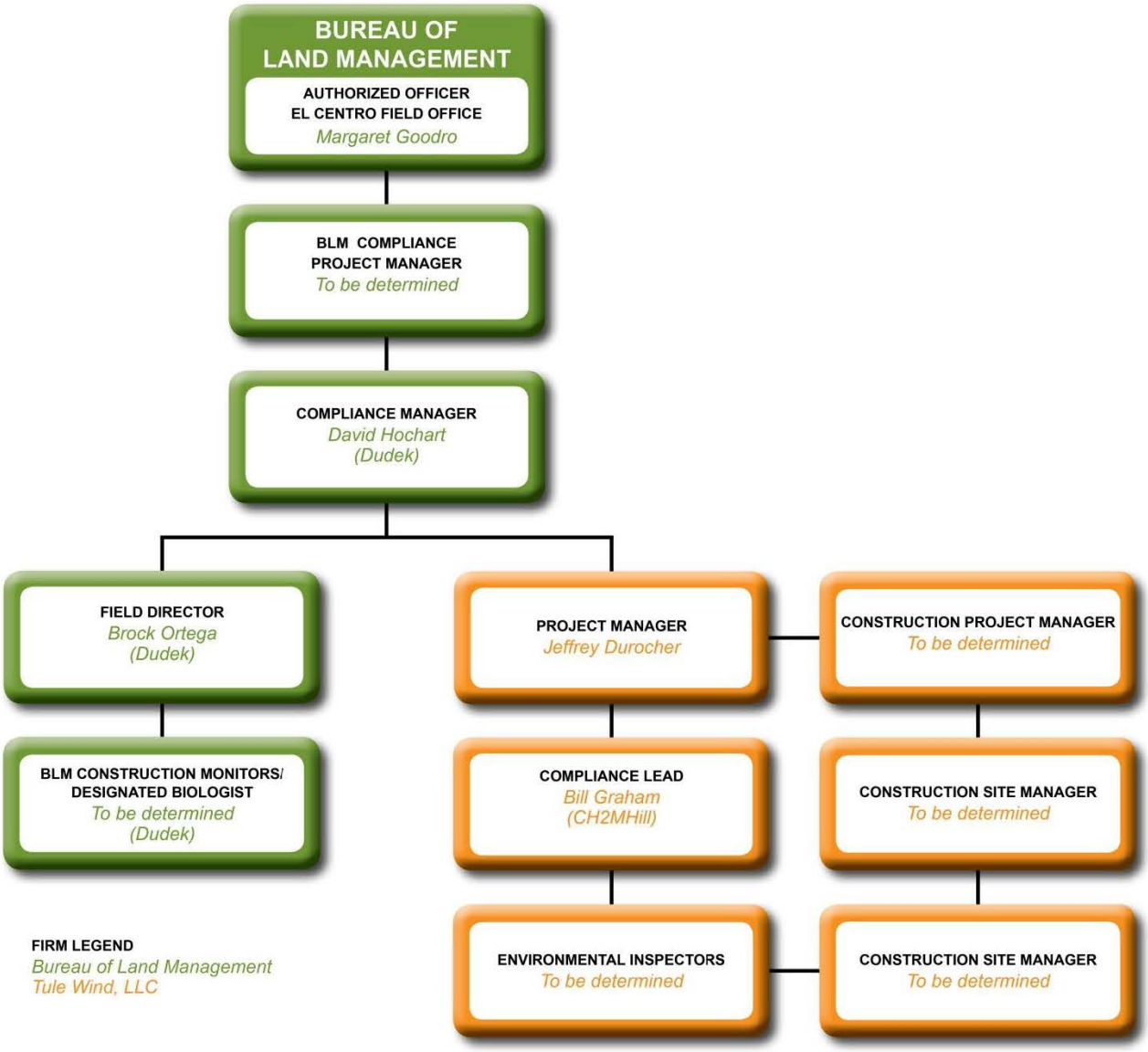
Tule Wind, LLC will prepare and distribute a monthly environmental compliance status report for distribution to key project members, including the BLM. The BLM Environmental Monitors will review the monthly report to ensure that the status of mitigation measures is consistent

with observations in the field. Any questions regarding the status of mitigation measures will be directed to the Tule Wind, LLC Compliance Lead. The monthly environmental compliance status report will also be a tool to keep all parties informed of construction progress and schedule changes.

3.2.5.1 Coordination with Other Agencies

As discussed in Section 2, several local, state, and federal agencies have jurisdiction over portions of the project. In addition, many of the mitigation measures were derived from specific permit conditions or agency input. Tule Wind, LLC will be responsible for contacting resource agencies and immediately notifying them of issues regarding their jurisdiction. The BLM Environmental Monitors may request copies of email correspondences, phone logs, or other documentation between Tule Wind, LLC and resource agencies to avoid direct involvement from BLM Environmental Monitors. However, if there is an unresolved issue regarding compliance with a mitigation measure or permit requirement under the jurisdiction of a resource agency, the BLM Environmental Monitors may elect to contact the agency to discuss resolution. The BLM Environmental Monitors will coordinate this call with Tule Wind, LLC and provide opportunity to participate in the call.

FIGURE 1
Organization Chart



4. REPORTING AND DOCUMENTATION

It is anticipated that the construction monitor and all compliance monitoring personnel will use a comprehensive quarterly summary database reporting system that is posted on a non-public, secure website (refer to Section 4.4, Non-Public and Public Project Website) and available for review to other approved jurisdictional agencies. Under this program, each entire quarterly report, consisting of all compliance levels and photographic documentation from logs, will be available each quarter and will provide the BLM project personnel and applicable agencies with a readily accessible record of construction progress, photographic documentation, and documentation of compliance with the project environmental requirements. The specifics of the reporting and documentation to be used for the Tule Wind Project are described in the following sections.

4.1 Notices to Proceed

Project-related construction activities will not begin until pre-construction mitigation measures and submittals have been satisfied. Once pre-construction mitigation measures have been completed, Tule Wind, LLC shall submit a request for a Notice-to-Proceed (NTP) for each and all phases of construction. The construction activities to be completed as part of each NTP will be determined by Tule Wind, LLC based on the construction schedule, the anticipated schedule for permit approvals, and other considerations. The BLM will issue an NTP for the applicable project components upon evaluation of Tule Wind, LLC's request and confirmation that all applicable pre-construction mitigation measure requirements have been completed. The NTP may include BLM or other agency conditions or requirements that must be satisfied prior to the start of work or during construction. Attachment F lists the mitigation measures, the timing for completion, and whether BLM review or approval is required before construction can commence.

4.2 Weekly Updates

Each construction monitor/designated biologist will compile his/her activity logs and contact information documents into a weekly update on the required cover and form provided in Attachments A and B, respectively. A weekly update will be maintained for the Tule Wind Project. The construction monitor/designated biologist will document the construction level as a percent complete or other identifying method as agreed to by the BLM; the presence of sensitive species or habitat and culturally sensitive sites; and provide a brief description of the construction activities observed (such as road grading, erosion control, etc.). When appropriate, relevant digital photographs will be taken and included in the weekly update.

Each separate activity monitored and documented in a log will be assigned a compliance level. The compliance levels that will be used for the Tule Wind Project are as follows:

- Communication
- Acceptable
- Problem area

- Noncompliance
- Serious violation.

4.1.1 Communication

A Communication Report will be prepared when necessary to document and track relevant meetings or discussions between the construction monitor and agencies, the applicant monitors, inspectors, or other contractor personnel.

4.1.2 Acceptable

An Acceptable Report will be prepared when a construction monitor/designated biologist determines that an inspected area or activity complies with the project specifications and all mitigation measures have been adequately implemented.

4.1.3 Problem Area

The construction monitors/designated biologists will prepare a Problem Area Report to record an observation that a location or activity does not meet the definition of acceptable but is not considered a noncompliance. The problem area category will be used to report a range of events and observations including the following:

- An incident that is accidental or unforeseeable but is not out of compliance with the project specifications, and the applicant's, response is appropriate and timely. An example would be a fuel leak where project personnel respond properly by stopping, containing, and cleaning up the spill in accordance with the project specifications.
- A location where the project is not out of compliance with the specifications but, in the judgment of the construction monitors/designated biologists, damage to resources could occur if corrective actions are not taken. Some examples are:
    - A topsoil pile located on the bank of a drainage
    - An improperly constructed/located erosion control structure.
- An activity that the construction monitors/designated biologists determine is an unintentional and isolated departure from the project specifications, with no damage to resources. An example would be a small amount of blading or mowing outside the access pathway that has no effect on sensitive resources such as sensitive plant habitat or a water body.

If a problem area is resolved in a timely manner, it will not be considered a noncompliance. If a problem area is found to be a repeat situation or multiple instances of a similar nature occur, is not corrected within the established time frame, or results in resource damage because timely corrective action failed to occur, the construction monitors/designated biologists may document the problem area as a noncompliance as described in the following section.

4.1.4 Noncompliance

A Noncompliance Report will be issued when a construction monitor/designated biologist observes an activity that violates (defined as not in compliance with) the project specifications, building codes, or other requirements; results in damage to resources; or places sensitive resources, personal safety or worker safety at unnecessary risk. Some examples of noncompliance activities are:

- Failure to install or maintain required erosion control devices
- Surface-disturbing activities conducted without an appropriate biological, cultural, or other resources monitor present, as necessary.

The construction monitors/designated biologists will notify the CM who will notify the applicant's compliance staff about a noncompliance before issuing a Noncompliance Report. The Noncompliance Report will include the name of the inspector or monitor and the time of notification. Where practicable and where the nature of the noncompliance activity warrants, the inspector or monitor will work closely and collaboratively with the CM to determine the appropriate corrective action.

Resolution of noncompliance activities will involve close coordination with the applicant's compliance staff, the BLM, and contractor construction supervisory personnel to ensure that the corrective measures are properly understood and implemented. It is the responsibility of the applicant's compliance staff to provide follow-up documentation to the BLM and other agencies with appropriate jurisdiction over the issue as well as to the CM. Once the applicant documents the resolution of a noncompliance, the applicable construction monitor/designated biologist will inspect the area and verify and document that the noncompliance has been adequately resolved.

4.1.5 Serious Violation

A Serious Violation Report will be issued by a construction monitor/designated biologist immediately on observing an activity that is not in compliance with the project specifications and causes substantial harm to resources or poses a serious threat to sensitive resources or worker/public safety. Examples of serious violations include deliberately conducting an activity that results in disturbance within an exclusion zone for a sensitive resource, repeated or cumulative noncompliance activities that could lead to a substantial impact on resources, and failure to correct previously identified noncompliance activities in an established time frame.

A Serious Violation Report requires that the CM and the BLM compliance project manager participate in a conference call or meeting with the applicant's compliance staff for the project to discuss the violation, the proper corrective actions, and possible follow-up actions that could be imposed. It will be the responsibility of the applicant's compliance staff to provide follow-up documentation to the BLM and other agencies with appropriate jurisdiction over the issue as well as to the CM. Once the applicant documents the resolution of a serious

violation, the construction monitor/designated biologist will inspect the area and verify that the issue has been adequately resolved.

4.2 Monthly Summary Reports

Monthly Summary Reports may be issued that briefly describe construction activities during the reporting period and summarize by compliance level the number of reports completed by the construction monitors/designated biologists during that reporting period and cumulatively for the construction period for that project phase. The Monthly Summary Report will also include a table of Problem Area and Noncompliance Reports issued by the construction monitors/designated biologists during the reporting period and the Level 1, 2, and 3 variance requests approved by the construction monitors/designated biologists and the CM during the reporting period. The CM's baseline electronic database reporting system will be designed to generate all the information in the tables of the Monthly Summary Report.

The Monthly Summary Reports will be posted on the non-public, secure project website (refer to Section 4.4). When the Monthly Summary Report is posted, the CM will send an email to the authorized distribution that it is available. The email will include the link to the website. The BLM, CM, and the applicant representatives will be included in the distribution for the Monthly Summary Report. A sample Monthly Summary Report is provided in Attachment C.

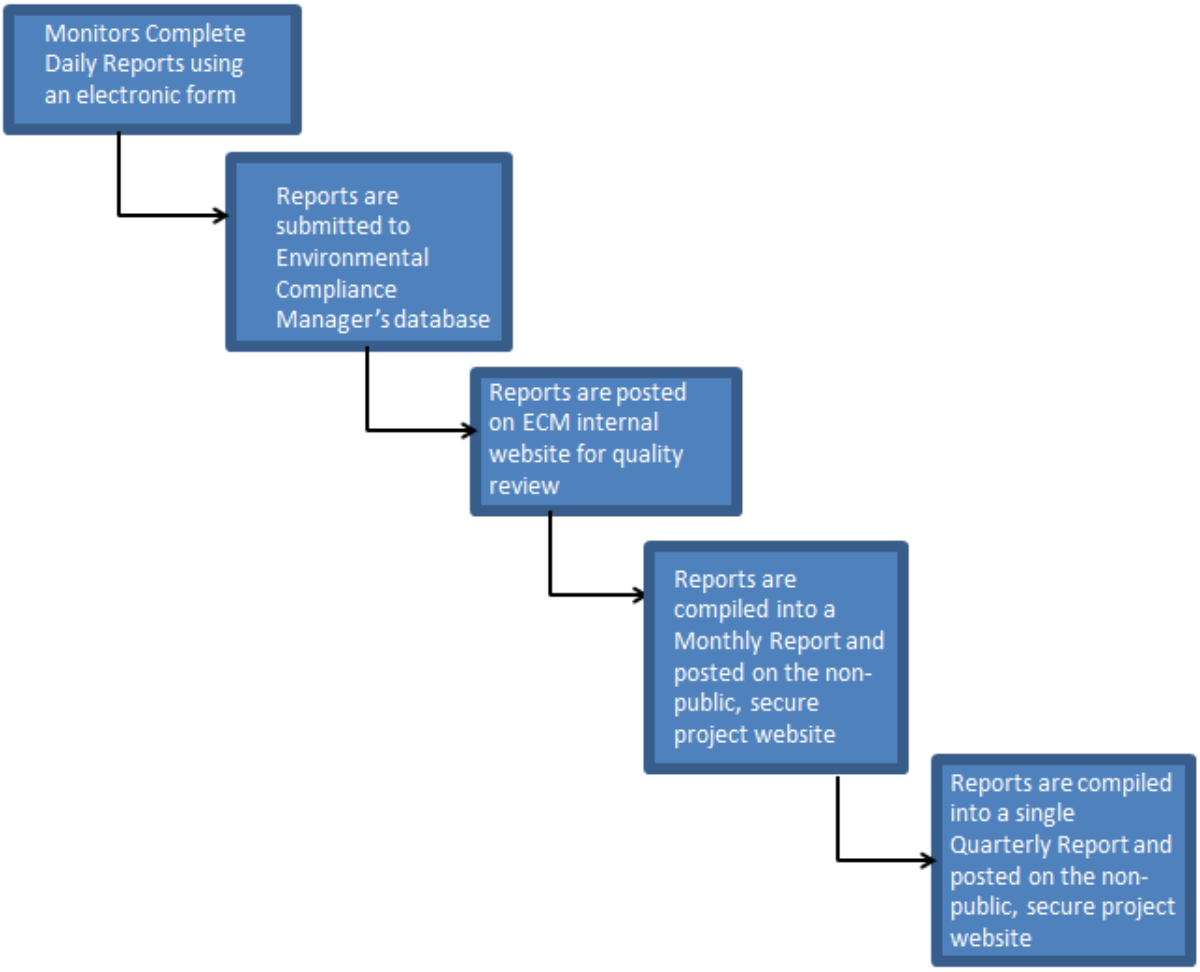
4.3 Quarterly Monitoring Reports

Each construction monitor/designated biologist will compile his/her weekly activity logs and contact information documents into a quarterly report on the required cover and form provided in Attachments A and B, respectively. A quarterly report will be maintained for the Tule Wind Project. The construction monitors/designated biologists will document the construction level as a percent complete or other identifying method as agreed to by the BLM; the presence of sensitive species or habitat and culturally sensitive sites; and provide a brief description of the construction activities observed (such as road grading, erosion control, etc.). When appropriate, relevant digital photographs will be taken and included in the quarterly report.

Each separate activity monitored and documented in a log will be assigned a compliance level as stated in Section 4.1.

Inspections and relevant photo documentation completed by each construction monitor/designated biologist will be sent electronically to the CM's database server at the end of each work week. At the end of each month, the separate reports will be compiled into one Quarterly Monitoring Report, reviewed by the CM, and posted on the non-public password-protected project website (refer to Section 4.4, Non-Public and Public Project Website). A flow diagram of the electronic web-based reporting system is shown on Figure 2. When the reports are posted, the CM will send an email to the authorized distribution stating that the reports are available. The email will summarize the compliance levels for the reports issued each day and include the link to the website. The BLM, CM, and authorized applicant representatives will be included in the distribution for all reports.

FIGURE 2
Electronic Web-Based Reporting System



4.4 Non-Public and Public Project Website

The CM will establish and maintain a non-public, password-protected project website to display the weekly, monthly, and quarterly monitoring reports and the approved Level 1, 2, and 3 variances (refer to Section 5, Variances). The BLM and CM representatives will have access to the entire website. The applicant's representatives may have access to the website based on approval from the BLM.

4.5 Public Website

A BLM-hosted public website will be updated as-needed throughout the project construction activities and will include relevant information on the construction progress and compliance reporting program. The BLM-hosted public website will contain monthly construction compliance status reports. The website will also include a project hot-line where interested parties can contact the CM regarding project concerns throughout construction.

5. VARIANCES

During construction, unforeseen or unavoidable site conditions could result in the need for changes from the approved mitigation measures and construction procedures. Additionally, the need for extra workspace, or changes to previously approved construction work areas may arise. Changes to previously approved mitigation measures, construction procedures, and construction work areas will be handled in the form of variance requests to be submitted by the applicant and reviewed and approved or denied by the BLM, with the delegation of some authority for variances to the CM. The variance process can also be a good mechanism to clarify discrepancies or inconsistencies discovered in project materials and/or to distribute information to the entire project team.

A system of three variance levels (Levels 1, 2, and 3) will be used to categorize and process variance requests. The three variance levels, the review and distribution process, and the decision-making authority proposed for each level are discussed in the following sections. A sample Variance Request Form is provided in Attachment I.

5.1 Level 1 Variances (Field Decisions)

Level 1 variances are site-specific, minor, performance-based changes to project specifications, construction methods, or mitigation measures that provide equal or better protection to environmental resources or better constructability. These minor variance requests can be reviewed and either approved or denied by the construction monitors/designated biologists in the field during normal construction operations.

Examples of Level 1 variance requests include the following:

- Allowing rubber-tired vehicles to use additional access roads that would not require any improvement to the road or repairs after construction (“like use”)
- Minor variations in site-specific plans that reflect differences in site conditions from those that were expected when the plan was developed (e.g., relocation of a spoil storage area within previously approved work areas)
- Minor changes to the project design that are required due to site-specific restrictions.

Level 1 variances may also be used to document and disseminate agency-directed changes to mitigation measures.

To initiate a Level 1 variance request, the applicant’s representative will fill out a Variance Request Form using the form in Attachment E and obtain the appropriate signatures. The applicant’s representative will then contact the construction monitor to review the proposed change. The applicant’s representative and the construction monitors/designated biologists will work together to evaluate the site-specific situation and determine if the variance request is appropriate.

The construction monitors/designated biologists may approve a Level 1 variance request if the results of implementing the change will provide equal or better protection for the resource than the original mitigation measure or if the original mitigation measure is not applicable to that specific site. If a Level 1 variance request is approved in the field, the construction monitors/designated biologists will sign the Variance Request Form. A Level 1 variance request can be implemented in the field as soon as it is approved by the construction monitor/designated biologist.

The construction monitors/designated biologists will document the variance approval in his/her log and will include the variance in the weekly status update (refer to Section 4.1, Weekly Status Update) and will transmit the approved form for posting on the project website (refer to Section 4.4, Non-Public and Non-Public Website).

If the requested variance exceeds the construction monitor's/designated biologist's authority level, the construction monitor/designated biologist will inform the applicant's representative that a Level 2 or Level 3 variance request is required.

5.2 Level 2 Variances

A Level 2 variance request exceeds the field decision authority of the construction monitor/designated biologist and requires processing by the CM. Before the CM can issue approval of a Level 2 variance request on federal land, the CM must approve the request. Level 2 variance requests generally involve project changes that would affect an area outside the previously approved work area, but within the areas previously surveyed for cultural resources, sensitive species, and biological resources. Level 2 variance requests typically require the review of supplemental documents, correspondence, and records.

Examples of Level 2 variance requests include the following:

- The use of extra workspace outside the previously approved work area but within previously surveyed areas
- The use of existing access roads that have not been previously approved if the use would not be considered "like use" that could be approved as a Level 1 variance (refer to Section 5.1, Level 1 Variances)
- Modifications to the plans specifically different than those in the approved POD.

To initiate a Level 2 variance request, the EI or other designated representative will fill out a Variance Request Form, prepare the appropriate supporting documentation, and obtain the required signatures.

The EI will complete and submit the Variance Request Form and supporting documentation by e-mail (scanned copy) or fax to the with a copy to the CM. Once the approval of the BLM compliance project manager is obtained, the CM will process the request.

If the Level 2 variance request is approved, the CM will sign the variance request and e-mail the approved form (scanned copy) to the applicant's representatives, the EIs/ construction monitors/designated biologists, and the BLM compliance project manager and other Compliance Contacts. The variance may be implemented in the field as soon as the approved variance is received. Verbal approval for Level 2 variance requests will not be granted. The CM will document the variance approval in the log and will include it in the weekly report (refer to Section 4.1) and post the approved Variance Request Form on the project website (refer to Section 4.4).

5.3 Level 3 Variances

Level 3 variance requests generally involve project changes that would affect an area outside the previously approved work area that are outside the areas previously surveyed for cultural resources, sensitive species, and biological resources, or one that would change the function, structure, technology required, or other part of the project previously approved in the POD. Level 3 variances may need to be implemented through an amendment to the ROW grant.

To initiate a Level 3 variance request, the EI Centro or other designated representative will fill out a Variance Request Form, prepare the appropriate supporting documentation, and obtain the required signatures.

The EI will complete and submit the Variance Request Form and supporting documentation by e-mail (scanned copy) or fax to the CM. Once the approval of the BLM compliance project manager is obtained, the CM will process the request.

Level 3 variance request approvals must be signed by the BLM compliance project manager or the BLM authorized officer in the case of a ROW grant amendment. The variance may be implemented in the field as soon as the approved variance is received. The CM will document the variance approval in the log and weekly status update (refer to Section 4.1) and post the approved Variance Request Form on the project website (refer to Section 4.4).

6. STOP WORK AUTHORITY

The BLM has the authority to stop construction of the Tule Wind Project if an activity is determined to be a deviation from the project environmental and cultural resource protection requirements or approved construction plans authorized. This authority may be delegated to the CM as determined appropriate by the BLM.

7. TRAINING AND PRECONSTRUCTION MEETING

The CM will ensure that the applicant prepares and conducts a WEAP for the construction contractor personnel prior to the start of construction. The BLM Project Manager and Compliance Contacts, CM, construction monitors and designated biologists will participate in the WEAP to present an overview of the ECCMP and to become familiar with the applicant's environmental inspection program and personnel. The CM or the BLM compliance project manager will explain the various components of the ECCMP, emphasizing the objectives of the ECCMP. The discussion will focus on the activities of the construction monitors/designated biologists and their interactions with the applicant's compliance staff and construction personnel.

The monitoring and documentation of compliance issues and construction progress will be described. A clear and concise explanation will be presented with respect to the variance request decision authority that the construction monitors/designated biologists will have in the field. Procedures that may be required to address variance requests will also be presented, as well as the time frame required for decisions to be made prior to implementation.

Before the applicant training, the CM will ensure that BLM and applicant participate in a preconstruction meeting. At that meeting, the BLM compliance project manager will discuss the requirements of ROD, the additional stipulations, and the ROW grant as well as those of the POD. The CM and other members of the Compliance Monitoring Team will participate in this preconstruction meeting.

In addition to participation in the applicant's WEAP and the preconstruction meeting, the CM will train the construction monitors/designated biologists in all project-specific procedures, duties, responsibilities, reporting requirements, and authorities, which includes the authority to grant variances, to complete their assigned tasks during monitoring of the Tule Wind Project construction activities.

8. EQUIPMENT

Personnel responsible for monitoring and documenting compliance with the measures in the ECCMP will require field support equipment such as notebook computers and associated software, digital cameras, cellular phones (smart phones), and vehicles for field personnel as described below. Specifically, the CM and each construction monitor/designated biologist will be equipped with a digital camera and a cellular phone or other communication device.

Each Compliance Monitor will be equipped with a notebook computer and appropriate software to facilitate the compilation, transfer, and storage of data. Each Compliance Monitor will also be equipped with a digital camera, cellular phone or other communication device, and vehicle adapter. A 4-wheel drive vehicle will be provided to each full-time Compliance Monitor throughout construction to maintain access to all areas of the ROW.

9. TULE WIND PROJECT OPERATIONS

Before operations of the Tule Wind Project begin, this ECCMP will be modified to provide detail of roles and responsibilities for those operations, along with actions to be taken and maintained to ensure compliance with operational permits, approvals, plans and additional applicable rules. The revised document will include, at a minimum, provisions for the following:

- A CM, in the role of ensuring compliance with the plan
- Adaptive management procedures to address change in conditions, regulations, etc.
- Means of accurately tracking compliance (e.g., compliance tracking database)
- Coordination with BLM and other agencies to report noncompliance issues
- Initial training and refresher training of personnel, commensurate with their roles and responsibilities
- Inspection and monitoring procedures
- Reporting and recordkeeping procedures
- Measures to address decommissioning of the Tule Wind Project at partial and final closure.

Depending on the role and time required the CM may designate other appropriately trained staff to carry out his/her responsibilities.

10. MITIGATION MONITORING PROGRAM TABLE

Attachment F lists the mitigation measures included in the Final EIR/EIS and the BLM ROD dated December 5, 2011. The Mitigation Monitoring Program table is the core document for environmental requirements on the project and will be the primary guideline for determining compliance with the ECCMP. A copy of the table should be kept with each crew working on the project and all supervisory staff working on the project should be familiar with its contents.

The BLM will use a modified version of the mitigation measure tables during the pre-construction planning and construction monitoring phases of the project to accurately track the status of mitigation measures. The tables will be sorted and divided into pre-construction measures and measures to be implemented during construction. Similarly, a separate table listing mitigation measures that require BLM approval may be generated. The modified tables will also include a status column that will be updated on a regular basis.

Effectiveness Review

The BLM may conduct a comprehensive review of conditions that are not effectively mitigating impacts at any time it deems appropriate. If in review the BLM determines that any conditions are not adequately mitigating significant environmental impacts caused by the project, then the BLM may impose additional reasonable conditions to effectively mitigate these impacts. These reviews will be conducted in a manner consistent with the BLM's rules and practices.

ATTACHMENT A
MONITORING REPORT COVER PAGE FORM

PROJECT: TULE WIND PROJECT

COMPLIANCE MONITORING PROGRAM
MONITORING REPORT COVER PAGE

SAMPLE MONITORING REPORT (COVER PAGE)

The following report is a compilation of the monitoring reports issued by the Construction Monitors/Designated Biologists and/or Compliance Manager for activities conducted on [Month] [Day], 20[XX]. Should you have any questions regarding the information contained in this report, please contact MONITOR at (XXX) XXX-XXXX (office) or (XXX) XXX-XXXX (cell phone).

Compliance Level

☐	Communication
☐	Acceptable
☐	Problem Area
☐	Noncompliance
☐	Serious Violation

ATTACHMENT B
MONITORING REPORT FORM

PROJECT: TULE WIND PROJECT

ENVIRONMENTAL INSPECTION AND MONITORING PROGRAM

MONITORING REPORT FORM

Report Number: _____ Date of Report: _____

Construction Monitor/Designated Biologist: _____

Compliance Level : ☐ Communication ☐ Noncompliance ☐ Acceptable ☐ Serious Violation ☐ Problem Area

Location: _____

SITE INSPECTION CHECKLIST

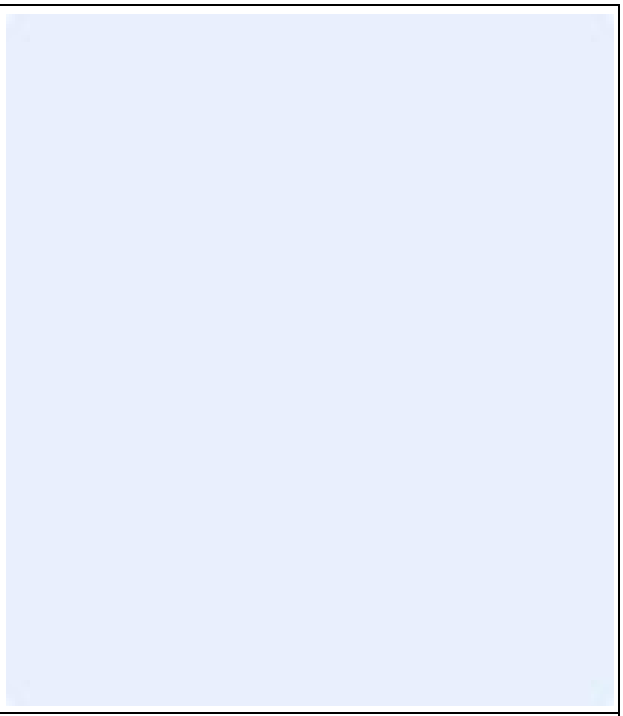
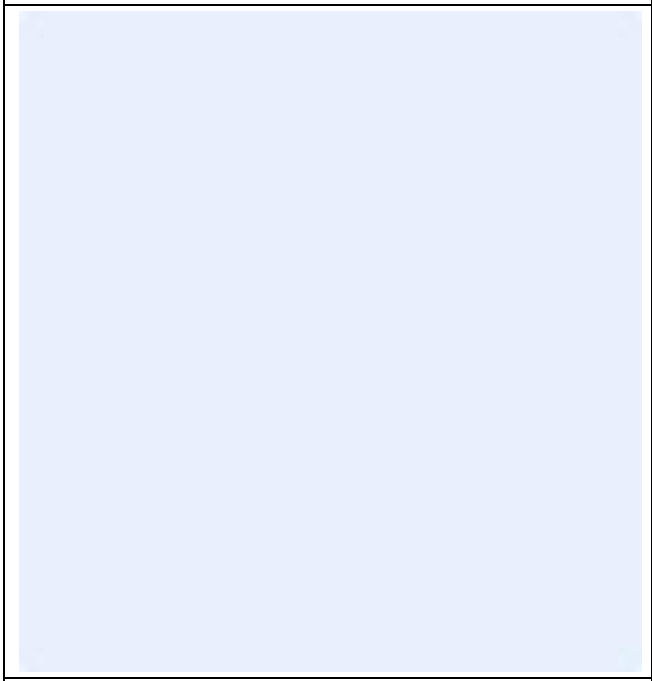
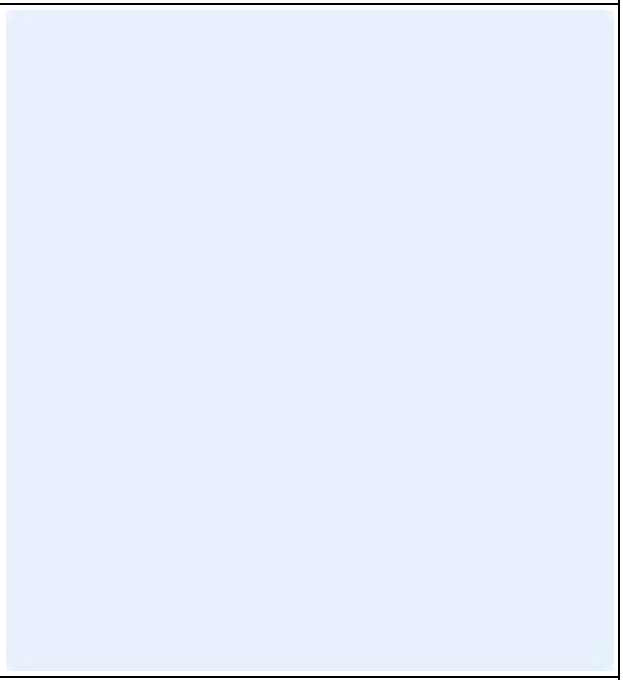
Air Quality	**Yes**	**No**
Is dust control being implemented (i.e., access roads watered, haul trucks covered, streets cleaned on a regular basis)?		
Do vehicles or equipment appear to be idling unnecessarily?		
Biology	**Yes**	**No**
Are appropriate measures in place to protect sensitive habitat (i.e., flagging, signage, exclusion fencing, biological monitor)?		
Are all activities being conducted within the approved work limits?		
Have impacts occurred to adjacent habitat (sensitive or non-sensitive)?		
Cultural and Paleontological Resources	**Yes**	**No**
Are known cultural resources clearly marked for exclusion?		
Is a cultural monitor on site if grading is occurring near known cultural sites?		
Is a paleontological monitor on site if grading is occurring (see mitigation measure for specifications)?		
Hazardous Materials	**Yes**	**No**
Have all spills been cleaned-up in accordance with the project's SPCC?		
Are fuels, oils, lubricants, and other hazardous materials on-site labeled and stored in appropriate containers?		
Water Quality	**Yes**	**No**
Have temporary erosion and sediment control measures been installed?		
Are BMPs in good condition and functional?		
Is mud tracked onto roadways cleaned-up in accordance with the project's SWPPP?		

DESCRIPTION OF OBSERVED ACTIVITY

ISSUES REQUIRING CORRECTIVE ACTION

Issue Requiring Corrective Action	Applicant Notification	Corrective Actions Implemented by Applicant

Photos:

Completed by:

Name: _____

Firm: Dudek

Date: _____

Distribution:

ATTACHMENT C
BLM AUTHORIZED OFFICER REPORT

BLM Authorized Officer
Weekly Report

Address:_____ Phone:_____ Website:_____
City, State Zip_____ Fax:_____

Project: Tule Wind Project

Prepared By:

Reporting Period:

Summary:

Site Inspections/Mitigation Monitoring:

- Compliance Issues with Applicable Conditions of Certification (e.g., areas out of compliance, interpretational disagreements, etc.)
- Issues of Concern with or by the Applicant

Construction Activities:

Compliance:

Construction Progress:

Week	% Complete (projected)	% Complete (updated)

Note: The percentage complete is an estimate only and is not derived directly from the project schedule.

Construction Schedule:

- Scheduled Activities for Next Week
- Potential Delays to the Online Date of the Project

Plan Review Submittal Items

Submittal Type	Description

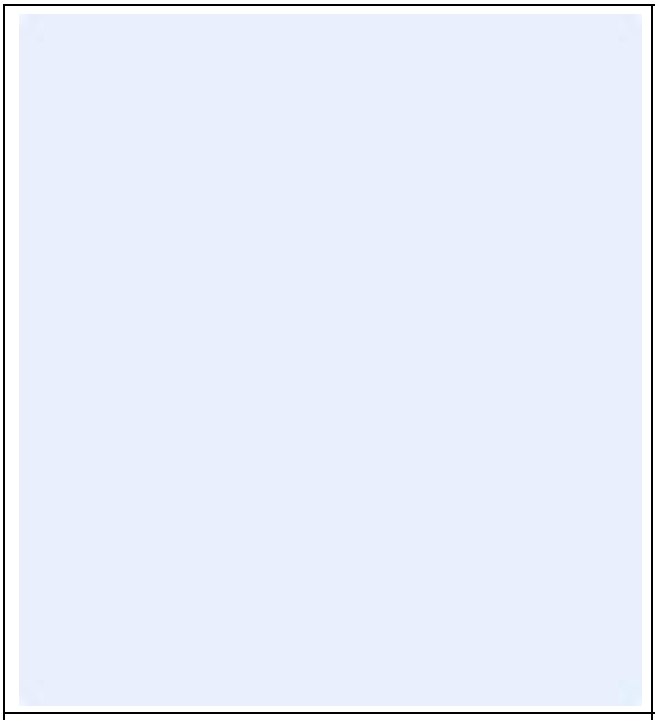
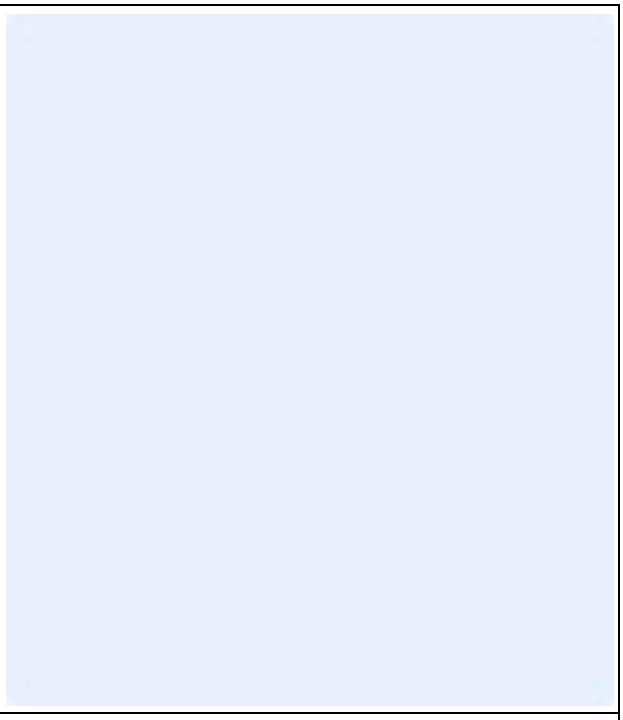
Notice to Proceed

NTP No.	Date Issued	Project Component	Conditions Included (Y/N)

Variance Requests

Variance Request No.	Submitted	Description	Status	Approval Date

Project Photographs from Week

ATTACHMENT D
CERTIFICATION OF COMPLETION OF WORKER ENVIRONMENTAL AWARENESS PROGRAM

Certification of Completion
Worker Environmental Awareness Program

This is to certify these individuals have completed a mandatory Worker Environmental Awareness Program (WEAP). The WEAP includes pertinent information on cultural, paleontological, and biological resources for all personnel (that is, construction supervisors, crews, and plant operators) working on site or at related facilities. By signing below, the participant indicates that he/she understands and shall abide by the guidelines set forth in the program materials. Include this completed form in the Quarterly Compliance Report.

No.	Employee Name	Title/Company	Signature	Sticker #
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				

Cultural Trainer: _____ Signature: _____ Date: _

Paleo Trainer: _____ Signature: _____ Date: __

Biological Trainer: _____ Signature: _____ Date: __

ATTACHMENT E
VARIANCE REQUEST FORM

Variance Request Form

LOGO

COMPANY
ADDRESS
CITY, STATE ZIP
PHONE

Variance:_____
Request No.:_____
Date Submit:_____
Date Approval Needed:_____
Date Agency Received:_____
Agency Approval Reference No.:_____

Request Prepared by:
Spread/ Location (Milepost):
Alignment Sheet / Sta. No.:
Net acreage affected:
Tract No:
Landowner:
In or within 50 feet of a wetland: ☐ Yes ☐ No
Current Land Use/ Vegetative Cover:
Within 50 feet of a water body: ☐ Yes ☐ No
Nearby Features (Water body, T&E Habitat, Wetland, Noxious Weed) Area, Residence, Cultural Resource Site (distance, etc.):

Variance Level: ☐ Level 1 ☐ Level 2 ☐ Level 3 **(To Be Assigned by Designated Representative)**

Variance From: ☐ Permit ☐ Plan/Procedure ☐ Specification ☐ Drawing ☐ Mitigation Measure ☐ Other:

Detailed Description of Variance: Attachments? ☐ Yes ☐ No Photos? ☐ Yes ☐ No

Variance Justification:

For (Company Name) Use Only

Additional Surveys Required	Surveyed Corridor Description	Additional Surveys Completed
Cultural Survey ☐ Yes ☐ No		☐ Yes ☐ No
T & E Survey ☐ Yes ☐ No		☐ Yes ☐ No

Report Documenting Survey:

Sign-off (as appropriate)	Name (print)	Approval Signature	Conditions (See Attached)
Contractor Sup't. or Env. Coordinator			☐ Yes ☐ No
Lead Environmental Inspector			☐ Yes ☐ No
Spread Supervisor			☐ Yes ☐ No
Environmental Field Manager			☐ Yes ☐ No
ROW Agent			☐ Yes ☐ No

For BLM Project Manager or Compliance Contact Use Only

Variance Approved: ☐ Variance Denied: ☐ Date:

Signature:

For Compliance Manager and Monitor Use Only

Variance Approved: Variance Denied: Date:

Signature:

Stipulations:

Spread: OPPC Variance Request No.:

VARIANCE CONDITIONS

Name: Title: Organization:

Conditions:

Name: Title: Organization:

Conditions:

Name: Title: Organization:

Conditions:

ATTACHMENT F
SUMMARY OF BUREAU OF LAND MANAGEMENT MITIGATION AND MONITORING

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
				Compliance Action	*Initials*	*Date*	*Remarks*
Biological Resources							
APM TULE-BIO-1	**Management of Temporary Stockpiles.** Temporary stockpiles outside the channels or debris basins will be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods will be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they are exposed to flowing water. No temporary stockpiles will be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles will be located landward of the 100-year floodplain to the maximum extent feasible.	During Construction	BLM	Stabilize stockpiles by compacting or other measures as defined in APM TULE-BIO-1. Placement of stockpiles outside of the 100-year floodplain to maximum extent feasible.			
APM TULE-BIO-2	**Minimization of Disturbance to Vegetation in Channel Bottom.** Iberdrola Renewables will minimize vegetation removal or reduction from channel bottoms to the least amount necessary to achieve the specific maintenance objectives for the reach. Vegetation removal in the channel bottom will be conducted in a non-continuous manner, allowing small patches of in-channel vegetation to persist provided it will not adversely affect conveyance capacity.	During Construction and Operation	BLM	Minimize vegetation removal from channel bottoms to the least amount necessary.			
APM TULE-BIO-3	**Road Base Discharge Avoidance.** Iberdrola Renewables will implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.	During Construction and Operation	BLM	Implement measures to prevent the discharge of road base, fill, sediments and asphalt beyond roadway limits.			
APM TULE-BIO-4	**Habitat Restoration.** Iberdrola Renewables will restore native vegetation in the affected work areas after construction. Restoration will include planting or seeding native plants that were present prior to the work and/or are compatible with existing vegetation near the work area. Iberdrola Renewables will prepare a restoration plan for the project that specifies the limits of restoration, planting mix and densities, performance criteria for survival and growth, and maintenance and monitoring procedures.	Prior to and During Construction	BLM	Restore native vegetation in the affected work areas following construction. Prepare a restoration plan as specified in APM TULE-BIO-4.			
APM TULE-BIO-5	**Concrete Wash-Out Protocols.** Iberdrola Renewables will implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices will be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete will not be discharged to the channel or basin. Concrete wastes will be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs will be used.	During Construction	BLM	Implement waste management practices during concrete operations. Ensure wash-out of concrete will not be discharged to a channel or basin.			
APM TULE-BIO-6	**Management of Fuels and Avoidance of Spills and Leaks.** All fuels, waste oils, and solvents will be collected and stored in tanks or drums within a secondary containment area consisting of an impervious floor and bermed sidewalls capable of holding the volume of the largest container stored within. Iberdrola Renewables will ensure that all equipment operating in or near a drainage, or in a basin, is in good working condition, and free of leaks. All vehicles will have drip pans during storage to contain minor spills and drips. No refueling or storage will take place within 100 feet (30.5 meters) of a drainage channel or structure. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a drainage. In addition, all maintenance crews working with heavy equipment will be trained in spill containment and response.	During Construction	BLM	All fuels, waste oils and solvents collected and stored in a secondary containment. No refueling or storage of vehicles within 100 feet of a drainage channel or structure.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
				Compliance Action	*Initials*	*Date*	*Remarks*
APM TULE-BIO-7	**Prevention of Erosion and Sedimentation.** Design measure such as straw waddles, silt fencing, aggregate materials, wetting compounds, and revegetation of native plant species will be implemented to decrease erosion and sedimentation.	During Construction	BLM	Placement of straw waddles, silt fencing, aggregate materials, wetting compounds, and revegetation of native plant species in disturbed areas.			
APM TULE-BIO-8	**Work Cessation during Heavy Rains.** All earthwork/disruptive heavy equipment will cease during heavy rains, and will not resume until conditions are suitable for the movement of equipment and materials. However, work inside towers, nacelles, etc., will continue.	During Construction	BLM	All earthwork/disruptive heavy equipment ceased during heavy rains.			
APM TULE-BIO-9	A qualified biologist will regularly monitor construction activities to ensure construction is proceeding incompliance with Iberdrola Renewables proposed environmental mitigation measures as well as those measures required by the regulatory agencies.	During Construction	BLM	Ensure a qualified biologist is present to regularly monitor construction activities.			
APM TULE-BIO-10	Iberdrola Renewables will develop an environmental training program for its construction contractors and personnel. The environmental training will cover the sensitive resources found on-site, flagging/fencing of exclusion areas, permit requirements, and other environmental issues. All construction site personnel will be required to attend the environmental training in conjunction with hazard and safety training prior to working on site.	Prior to and During Construction.	BLM	Develop an environmental training program and ensure all construction personnel are trained prior to working onsite.			
APM TULE-BIO-11	A monitoring program would be implemented to ensure environmental conditions are monitored during the operation and decommissioning phases (Iberdrola Renewables 2010). The monitoring program would include adaptive management strategies to reflect improved technology or the need to adjust to a better understanding of the data during the actual impacts of the project.	Operation and Decommissioning.	BLM	Implement a monitoring program to ensure environmental conditions are monitored during the operation and decommissioning phases.			
APM TULE-BIO-12	Nighttime vehicle traffic volume associated with project activities will be kept to a minimum and speeds will be limited to 10 mph to prevent mortality of nocturnal wildlife species.	Operation	BLM	Vehicle speeds along access roads limited to 10 mph during nighttime hours.			
APM TULE-BIO-13	At the completion of the project, all construction materials will be removed from the site.	Construction	BLM	Ensure all construction materials are removed following construction.			
APM TULE-BIO-14	Except when not feasible due to physical or safety constraints, all project vehicle movement will be restricted to existing access roads and access roads constructed as a part of the project and determined and marked by the project proponent in advance of construction. Approval from a biological monitor will be obtained prior to any travel off of existing access roads.	Construction	BLM	Restrict all vehicle movement to existing access roads and access roads constructed as part of the project.			
APM TULE-BIO-15	During construction and operation of the proposed project, measures will be taken to avoid/minimize the impact of light intrusion into adjacent native habitat. The BLM Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western U.S. recommends the following: • Night lighting during construction would not occur to the maximum extent practicable; • Any night lighting during construction and operation would be selectively placed, shielded, and directed away from all areas of native habitat to the maximum extent practicable; and • All unnecessary lighting should be turned off at night to limit attracting migratory birds.	Construction and Operation	BLM	Implement measures to minimize light intrusion into adjacent native habitat.			
APM TULE-BIO-16	The construction contractor(s) shall adhere to all San Diego County Air Pollution Control District (SDAPCD) Rules and Regulations. Compliance with SDAPCD Rule 55 shall reduce fugitive dust during construction.	Construction	BLM	Comply with SDAPCD rules and regulations to minimize dust during construction.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
				Compliance Action	*Initials*	*Date*	*Remarks*
APM TULE-BIO-17	Implementation of active dust suppression measures during the construction period to minimize the creation of dust clouds; including, but not limited to: applying water at least once per day, or conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction. Increase watering frequency to four times per day if winds exceed 25 mph. Non-toxic soil stabilizers may be utilized to control fugitive dust.	Construction	BLM	Apply water once per day or conduct watering as necessary to prevent visible dust emissions.			
APM TULE-BIO-18	Restrict construction vehicle speeds to 20 mph on unpaved roads.	During Construction	BLM	Maintain vehicle speeds of 20 mph on unpaved access roads.			
APM TULE-BIO-19	Apply soil stabilizers to construction areas not being utilized and stabilize disturbed areas if subsequent construction is delayed.	During Construction	BLM	Application of soil stabilizers in inactive construct areas.			
APM TULE-BIO-20	Replace ground cover in disturbed areas as soon as feasible.	During Construction	BLM	Replace ground cover in disturbed areas as soon as feasible.			
APM TULE-BIO-21	Prior to any blasting east of McCain Valley Road biological monitors would confirm that no peninsular bighorn sheep were present within one-third of a mile of the area designated for blasting, in order to avoid harassment or disturbance impacts from blasting. If sheep are present and blasting cannot wait for a time when they have left the area then a temporary sound barrier will be erected to reduce the impacts on sheep habitat.	Prior to and During Construction	BLM	Ensure a biological monitor has completed surveys to identify whether peninsular bighorn sheep are present within one-third mile of an area designated for blasting.			
MM BIO-1a	**Confine all construction and construction-related activities to the minimum necessary area as defined by the final engineering plans.** All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. An environmental monitor shall complete regular observations to ensure that all work is completed within the approved work limits, and in the event any work occurs beyond the approved limits, it shall be reported. During and after construction, entrances to access roads shall be gated to prevent the unauthorized use of these construction access roads by the general public. Signs prohibiting unauthorized use of the access roads shall be posted on these gates. In addition, to control unauthorized use of project access roads by off-road vehicle enthusiasts, the applicants shall provide funding to land management entities responsible for areas set aside for habitat conservation to provide for off-road vehicle enforcement patrols. The responsible land management entities will formulate what funding is reasonable to control unauthorized use of project access roads.	Prior to and During Construction	BLM	• Stake and flag boundaries • Use BLM-approved biologist to ensure work is completed within the approved work spaces.			
MM BIO-1b	**Conduct contractor training for all construction staff.** Prior to construction, all developer, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to implement the mitigation measures and comply with environmental regulations, including plant and wildlife species avoidance, impact minimization, and best management practices. Sign-in sheets and hard hat decals shall be provided that document contractor training has been completed for construction personnel.	Prior to Construction	BLM	Develop and implement worker training.			
MM BIO-1c	**Conduct biological construction monitoring.** An authorized biological monitor must be present at the construction sites during all ground disturbing and vegetation removal activities. The monitor shall survey the construction sites and surrounding areas for compliance with all environmental specifications. Weekly biological construction monitoring reports shall be prepared and submitted to the appropriate permitting and responsible agencies through the duration of the ground disturbing and vegetation removal construction phase. Monthly biological	Construction	BLM	• Use BLM-approved biologist when completing ground disturbing and vegetation removal activities. • Submit weekly and monthly biological construction monitoring reports.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
				Compliance Action	*Initials*	*Date*	*Remarks*
	construction monitoring reports shall be prepared and submitted through the duration of project construction to document compliance with environmental requirements.						
MM BIO-1d	**Restore all temporary construction areas pursuant to a Habitat Restoration Plan.** All temporary work areas not subject to long-term use or ongoing vegetation maintenance shall be revegetated with native species characteristic of the adjacent native vegetation communities in accordance with a Habitat Restoration Plan. A habitat restoration specialist will be designated and approved by the BLM and County of San Diego and will determine the most appropriate method of restoration. Restoration techniques may include the following: hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. The Habitat Restoration Plan shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. At the completion of project construction, all construction materials shall be completely removed from the site. All temporary construction access roads shall be permanently closed and restored. Topsoil located in areas to be restored will be conserved and stockpiled during the excavation process for use in the restoration. Wherever possible, vegetation would be left in place to avoid excessive root damage to allow for natural recruitment following construction. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the BLM or County (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the BLM or County, the temporary impact shall be considered a permanent impact and compensated accordingly (see MM BIO-1e).	Prior to and Post Construction	BLM	Develop and implement a Habitat Restoration Plan.			
MM BIO-1e	**Provide habitat compensation or restoration for permanent impacts to native vegetation communities.** Permanent impact to all native vegetation communities shall be compensated through a combination habitat compensation and habitat restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Habitat compensation shall be accomplished through agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the Proposed PROJECT. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as compensation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to a Habitat Restoration Plan, which includes success criteria and monitoring specifications as described above for Mitigation Measure BIO-1d. The Habitat Restoration Plan shall be approved by the permitting agencies prior to construction of the project. All habitat compensation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.	Prior to Construction	BLM, USFWS and CDFG	Develop and implement a Habitat Compensation Plan.			
MM BIO-1f	**Implement fire prevention best management practices during construction and operation activities.** Fire prevention best management practices shall be implemented during construction and operation of the project as specified by the Construction Fire Prevention/Protection Plan (to be developed as required under Mitigation Measure FF-1) and Wildland Fire Prevention and Fire Safety Electric Standard Practice Operation and Maintenance Plan (to be revised as required under Mitigation Measure FF-2).	Construction and Operation	BLM	See MM FF-1 and MM FF-2.			
MM BIO-1g	**Prepare and implement a Stormwater Pollution Prevention Plan.** Prepare a	Construction	BLM	Develop and implement SWPPP. See MM			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
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	Stormwater Pollution Prevention Plan pursuant to the specifications described in Mitigation Measure HYD-1.			HYD-1.			
MM BIO-2a	**Limit temporary and permanent impacts to jurisdictional features to the minimum necessary as defined by the final engineering plans.** Obtain and implement the terms and conditions of agency permit(s) for unavoidable impacts to jurisdictional wetlands and waters. All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas within the approved work limits identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. The project applicant shall obtain applicable permits and provide evidence of permit approval, which may include but not be limited to a Clean Water Act Section 404 Permit, a Clean Water Act Section 401 water quality certification, and a Section 1602 streambed alteration agreement with the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game for impacts to jurisdictional features prior to project construction. The terms and conditions of these authorizations shall be implemented.	Construction	BLM	Verify agency permits have been obtained prior to construction. Limit construction to areas within approved limits as identified on final engineering plans.			
MM BIO-2b	**Implement habitat creation, enhancement, preservation, and/or restoration pursuant to a wetland mitigation plan to ensure no net loss of jurisdictional waters and wetlands.** Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination of habitat creation (i.e., establishment), enhancement, preservation, and/or restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation, enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration. Restoration techniques may include hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the BLM or County (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the BLM or County, the temporary impact shall be considered a permanent impact and compensated accordingly. All habitat creation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat creation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.	Prior to, During, and Post-Construction	BLM and/or County	Develop and implement Wetland Mitigation Plan and Habitat Restoration Plan.			
MM BIO-2c	**Where drainage crossings are unavoidable, construct access roads at right angles to drainages.** Unless not possible due to existing landforms or site constraints, access roads shall be built perpendicular to drainages to minimize the impacts to these resources and prevent impacts along the length of jurisdictional features.	Construction	BLM	Construct access roads perpendicular to drainages.			
MM BIO-3a	**Prepare and implement a Noxious Weeds and Invasive Species Control Plan.** A Noxious Weeds and Invasive Species Control Plan has been prepared by HDR and shall be reviewed by the responsible agencies. On BLM lands, the plan shall be consistent with an Integrated Pest Management approach per the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report (2007).The plan shall be implemented during all phases of project construction and operation. The plan shall include best management practices to avoid and minimize the direct or indirect effect of the establishment and spread of invasive plant species during construction.	Prior to construction	BLM	Implement Noxious Weeds and Invasive Species Control Plan.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
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	Implementation of specific protective measures shall be required during construction, such as cleaning vehicles prior to off-road use, using weed-free imported soil/material, restricted vegetation removal and requiring topsoil storage. Development and implementation of weed management procedures shall be used to monitor and control the spread of weed populations along the construction access and transmission line right-of-ways. Vehicles used in transmission line construction shall be cleaned prior to operation off of maintained roads. Existing vegetation shall be cleared only from areas scheduled for immediate construction work and only for the width needed for active construction activities. Noxious weed management shall be conducted annually to prevent the establishment and spread of invasive plant species. This shall include weed abatement efforts, targeted at plants listed as invasive exotics by the California Exotic Plant Pest Council in their most recent "A" or "Red Alert" list. Only herbicides approved by BLM in California will be used on BLM lands. Herbicide application can only occur on BLM lands with an approved Pesticide Use Proposal (PUP). Pesticide use should be limited to non-persistent pesticides and should only be applied in accordance with label and application permit directions and restrictions for terrestrial and aquatic applications.						
MM BIO-5a	**Install fencing or flagging around identified special-status plant species populations in the construction areas.** Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species for all construction areas. All of the special-status plant locations shall be recorded using a Global Positioning System (GPS), which will be used to site the avoidance fencing/flagging. Special-status plant species shall be avoided to the maximum extent possible by all construction activities. The boundaries of all special-status plant species to be avoided shall be delineated in the field with clearly visible fencing or flagging. The fencing/flagging shall be maintained for the duration of project construction activities.	Construction	BLM	• Use BLM-approved biologist for focused surveys. • Install fencing/flagging to ensure avoidance during construction.			
MM BIO-5b	**Implement special-status plant species compensation.** Impacts to special-status plant species shall be maximally avoided. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through plant salvage and relocation or through off-site land preservation. Where salvage and relocation is feasible and biologically preferred, it shall be conducted pursuant to an agency-approved plan that details the methods for salvage, stockpiling, and replanting and the characteristics of the receiver sites. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. Success criteria and monitoring shall also be included in the plan. Where off-site land preservation is biologically preferred, it shall be implemented pursuant to an agency approved plan that describes the mitigation land resources and the long-term management and legal protection assurances.	Prior to Construction	BLM and CDFG	Develop and implement plant salvage and relocation or acquire off-site land preservation.			
MM BIO-7a	**Cover and/or provide escape routes for wildlife from excavated areas and monitor these areas daily.** All steep trenches and excavations during construction shall be inspected twice daily (i.e., morning and evening) by a qualified biologist to monitor for wildlife entrapment. Large/steep excavations shall be covered and/or fenced nightly to prevent wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.	Construction	BLM	• Use BLM-approved biologist for inspections within steep trenches and excavations. • Cover and/or fence large/steep excavations nightly. • Provide an earthen ramp to allow for a wildlife escape route.			
MM BIO-7b	**Enforce speed limits in and around all construction areas.** Vehicles shall not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site or 10 miles per hour during the night.	Construction	BLM	Ensure vehicle speeds do not exceed 15 miles per hour on unpaved roads or ten miles per hour during the night.			

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MM BIO-7c	**Minimize night construction lighting adjacent to native habitats.** Lighting of construction areas at night shall be the minimum necessary for personnel safety and shall be low illumination, selectively placed, and directed/shielded appropriately to minimize lighting in adjacent native habitats.	Construction	BLM	Direct night lighting to minimize lighting to adjacent native habitats.			
MM BIO-7d	**Prohibit littering and remove trash from construction areas daily.** Littering shall not be allowed by the project personnel. All food-related trash and garbage shall be removed from the construction sites on a daily basis.	Construction	BLM	Properly dispose of trash.			
MM BIO-7e	**Prohibit the harm, harassment, collection of, or feeding of wildlife.** Project personnel shall not harm, harass, collect, or feed wildlife. No pets shall be allowed in the construction areas.	Construction	BLM	Implement environmental awareness training and regular construction monitoring.			
MM BIO-7f	**Obtain and implement the terms of agency permit(s) with jurisdiction over federal- or state-listed species.** If determined necessary, the applicant shall obtain a biological opinion through Section 7 consultation between the Bureau of Land Management and U.S. Fish and Wildlife Service for impacts to federally listed wildlife species and a Section 2081 permit (or consistency determination) from the California Department of Fish and Game for impacts to state-listed wildlife species resulting from this project. The terms and conditions included in these authorizations shall be implemented, which may include seasonal restrictions, relocation, monitoring/reporting specifications, and/or habitat compensation through restoration or acquisition of suitable habitat.	Prior to and During Construction	BLM	Verify Biological Opinion has been obtained and terms and conditions included in the Biological Condition have been incorporated into construction documents.			
MM BIO-7h	**Provide compensation for temporary and permanent impacts to Quino checkerspot butterfly habitat through conservation and/or restoration.** Temporary and permanent impact to Quino checkerspot butterfly shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. Habitat compensation shall be accomplished through U.S. Fish and Wildlife Service-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting Quino checkerspot butterfly. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as habitat compensation provided that the restoration effort is demonstrated to be feasible and implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to project construction. All habitat compensation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.	Prior to and During Construction	BLM	Provide compensation for impacts to Quino checkerspot butterfly habitat; develop and implement Habitat Restoration Plan.			
MM BIO-7j	**Conduct pre-construction nesting bird surveys and implement appropriate avoidance measures for identified nesting birds.** If the project must occur during the avian breeding season (February 1st to August 31st, and as early as January 1 for some raptors), Tule Wind, LLC should prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds. Tule Wind, LLC will submit to the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) the NBMMRP (see following for details) for review and comment to obtain concurrence the NBMMRP meets the intent of the mitigation measure prior to commencement of the project during the breeding season. The NBMMRP should include the following:	Prior to and During Construction	BLM	Prepare and implement a Nesting Bird Management, Monitoring, and Reporting Plan.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)	Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
			Compliance Action	*Initials*	*Date*	*Remarks*
1. Nest Survey Protocols describing the nest survey methodologies 2. A Management Plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks 3. A Monitoring and Reporting Plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFWS and CDFG to monitor Tule Wind, LLC 's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 4. A schedule for the submittal (usually weekly) of the NML 5. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks 6. A detailed explanation of how the buffer widths were determined 7. All measures Tule Wind, LLC will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting. To determine presence of nesting birds that the project activities may affect, surveys should be conducted beyond the project area—300 feet for passerine birds and 500 feet for raptors. The survey protocols should include a detailed description of methodologies utilized by CDFG-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols should include but are not limited to the size of project corridor being surveyed, method of search, and behavior that indicates active nests. Each nest identified in the project area should be included in the NML. The NMLs should be updated daily and submitted to the CDFG weekly. Since the purpose of the NMLs is to allow the CDFG to track compliance, the NMLs should include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs should provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs will allow for tracking the success and failure of the buffers and will provide data on the adequacy of the buffers for certain species. Tule Wind, LLC will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths should be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths should consider the following factors: a. Nesting chronologies b. Geographic location c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise) d. Type and extent of disturbance (e.g., noise levels and quality— punctuated, continual, ground vibrations—blasting-related vibrations proximate to tern colonies are known to make the birds flush the nests) e. Visibility of disturbance f. Duration and timing of disturbance g. Influence of other environmental factors h. Species' site-specific level of habituation to the disturbance. Application of the standard buffer widths should avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being						

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	flushed from a nest, the buffer must be widened.						
MM BIO-10a	**Design all transmission towers and lines to conform with Avian Power Line Interaction Committee standards.** The Proposed Project shall implement recommendations by the Avian Power Line Interaction Committee (2006), which will protect raptors and other birds from electrocution. These measures are sufficient to protect even the largest birds that may perch or roost on transmission lines or towers from electrocution.	Prior to Construction	BLM	Final construction plans for transmission towers and lines conform to Avian Power Line Interaction Committee standards.			
MM BIO-10b	**Develop and implement project-specific Avian Protection Plans.** Develop and implement an Avian Protection Plan related to wire, transmission tower, and facilities impacts from electrocution and collision of bird species. An Avian Protection Plan shall be developed jointly with the U.S. Fish and Wildlife Service and California Department of Fish and Game and shall provide the framework necessary for implementing a program to reduce bird mortalities and document actions. The Avian Protection Plan shall include the following: corporate policy, training, permit compliance, construction design standards, nest management, avian reporting system, risk assessment methodology, mortality reduction measures, avian enhancement options, quality control, public awareness, and key resources.	Prior to Construction	BLM, USFWS, CDFG	Develop and implement an Avian Protection Plan.			
MM BIO-10c	**Design and configure wind turbines to maximally avoid and minimize bird and bat resources.** Various design features shall be used to reduce or avoid impacts to bird and bat species. These may include avoiding guy wires, reducing impacts with appropriate turbine layout based on micro-siting decisions that may include such refinements as placing all turbines on the ridgeline and avoiding placement of turbines on slopes and within canyons, placing power lines underground as much as feasible, and reducing foraging resources near turbines.	Prior to Construction	BLM, USFWS, and CDFG	Provide documentation identifying design features incorporated into project design.			
MM BIO-10d	**Minimize turbine lighting.** Night-lighting may serve as an attractant for birds especially migrants, which may be attracted to the light and then become unable to leave it. Lighting that attracts birds shall be avoided on the turbines. Lights with short flash duration that emit no light during the off phase shall be used. Lights that have the minimum number of flashes per minute and the briefest flash duration shall be used. Lights on auxiliary buildings near turbines and met towers shall be motion-sensitive rather than constant “on” lights. All lighting on buildings shall be shielded and downcast. To avoid disorienting or attracting birds, Federal Aviation Administration visibility lighting shall employ only strobe, strobe-like, or blinking incandescent lights, preferably with all lights illuminating simultaneously. Minimum intensity, maximum “off-phased” duel strobes are preferred. No steady burning lights shall be used.	Prior to Construction	BLM	Provide documentation identifying design features that were incorporated to minimize turbine lighting.			
MM BIO-10e	**Conduct post-construction bird and bat species mortality monitoring and reporting pursuant to an approved monitoring program.** Conduct a minimum of at least 3 years of post-construction bird and bat mortality monitoring per guidance from the BLM and recommendations from the Wind Turbine Guidelines Advisory Committee (USFWS 2009a) to satisfy Tier 4 and Tier 5 monitoring requirements. If the initial 3 years of survey do not capture a good rain year (i.e. good eagle reproduction), then an additional 2 years of data collection will be required such that the surveys are conducted during a good rain year. Additionally, if post-construction bird and bat mortality monitoring during the first 3 years identifies mortality inconsistent with the pre-project impact assessments, additional years of post-construction bird and bat mortality monitoring may be required by the wildlife agencies, as described the Avian and Bat Protection Plan. Annual monitoring reports shall be submitted to the wildlife agencies, BLM, San Diego County, and BIA.	Post-Construction	BLM, USFWS, and CDFG	Conduct post-construction bird and bat mortality monitoring as defined in MM BIO-10e.			

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MM BIO-10g	**Monitor golden eagles nests in the area to track productivity.** Conduct annual surveys of golden eagle territories within 10 miles of the turbines for a minimum of 10 years. Conduct surveys to determine location of active nest, number of eggs laid and number of young fledged, using methods similar to those described by Pagel et al. 2010 and as described in the project-specific Avian and Bat Protection Plan, which can be accessed at http://www.cpuc.ca.gov/environment/info/dudek/ecosub/Tule_TS.htm. Annual monitoring reports shall be provided to the wildlife agencies, BIA, and the Bureau of Land Management.	Construction	BLM	Conduct golden eagle surveys as defined in MM BIO-10g and in conformance with the Avian and Bat Protection Plan.			
MM BIO-10h	**Implement an adaptive management program in an Avian and Bat Protection Plan that provides triggers for required operational modifications (seasonality, radar, turbine-specific modifications, cut-in speed).** An Avian and Bat Protection Plan shall be prepared and implemented by the project applicant based on an adaptive management program that uses the information provided from the implementation of Mitigation Measures 10e and 10g, which includes post-construction bird and bat monitoring and the golden eagle nest productivity monitoring. The Avian Protection Plan required under Mitigation Measure 10b would be augmented for the Tule Wind Project to incorporate protection measure for bat species. This program must implement in manner that assures net zero loss of golden eagle on a population level basis. If mortality of any golden eagle occur as the Tule Wind Project's operation, regardless of age or gender, the responsible and adjacent turbines will be shut down while the adaptive management program, as described in the complete Avian and Bat Protection Plan (available at http://www.cpuc.ca.gov/environment/info/dudek/ecosub/Tule_TS.htm), is implemented. This program will be based on monitoring of the active nest locations and eagle activity within 10 miles of the turbines. Measures will include curtailing operation of all or selected turbines during the fledging period of the active nests or potential permanent shutdown of turbines that are closest to active nests until the nest location changes to a farther location (eagles are known to build numerous nests within their territory and use different nest locations each year (Kochert et al. 2002)). Other measures (e.g., radar monitoring and turbine modifications) will be implemented as dictated by the monitoring data and as specified by the adaptive management program. Based on the monitoring of bat mortality, the adaptive management program shall have triggers for the implementation of limited and periodic feathering or shut downs of turbines to avoid impacts to bats.	Construction	BLM	Develop and implement an adaptive management program and Avian and Bat Protection Plan. See MMs 10b, 10e, and 10g.			
MM BIO-10i	**Obtain written agency approval of the Avian and Bat Protection Plan.** Prior to project construction, written approval of the Avian and Bat Protection Plan shall be obtained from the USFWS and CDFG. Written approval from the U.S. Fish and Wildlife Service will document that the Avian and Bat Protection Plan was prepared consistent with the Bald and Golden Eagle Protection Act, but will not in and of itself authorize take of golden eagles or determine that no take will occur Written approval from the California Department of Fish and Game will document that the Avian and Bat Protection Plan is technically adequate and consistent with the California Department of Fish and Game guidelines, but will not authorize take of this fully protected species.	Prior to Construction	BLM	Obtain concurrence from USFWS on the Avian and Bat Protection Plan.			
MM BIO-11a	**Conduct maintenance activities resulting in vegetation disturbance outside of the bird nesting season or conduct pre-construction nesting bird surveys.** Maintenance activities with the potential to result in direct or indirect habitat disturbance, most notably vegetation management, shall be conducted outside of	Post-Construction	BLM, USFWS and CDFG	Conduct maintenance activities outside of the bird nesting season or conduct pre-construction nesting bird surveys as specified in MM BIO-11a.			

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	the bird nesting season to the maximum extent practicable. Where avoidance is not possible, the project proponent shall conduct pre-construction nesting bird surveys to determine the presence/absence of active nests in or adjacent to construction areas. If active nests are identified, appropriate avoidance measures would be identified and implemented to prevent disturbance to the nesting bird(s). If federal or state listed nesting birds are identified, the project proponent shall contact the U.S. Fish and Wildlife Service and/or California Department of Fish and Game to determine the appropriate course of action.						
Visual Resources							
APM TULE-AES-1	Use of wind turbine towers, nacelles, and rotors that are locally uniform and that conform to high standards of industrial design to present a trim, uncluttered, aesthetic appearance.	Prior to Construction	BLM	Project design shall identify wind turbine towers, nacelles, and rotors that are locally uniform and that conform to high standards of industrial design to present a trim, uncluttered, aesthetic appearance.			
APM TULE-AES-2	Use of low-reflectivity, neutral white finishes for the towers, nacelles, and rotors to minimize contrast with the sky backdrop and to minimize the reflections that can call attention to structures in the landscape.	Prior to Construction	BLM	Project design shall identify use of low-reflectivity, neutral white finishes for the towers, nacelles, and rotors to minimize contrast with the sky backdrop.			
APM TULE-AES-3	Use of neutral gray, white, off-white, or earth tone finishes for the small cabinets containing pad-mounted equipment that might be located at the base of each turbine, to help the cabinets blend into the surrounding ground plane.	Prior to Construction	BLM	Project design shall identify use of neutral gray, white, off-white, or earth tone finishes for the small cabinets containing pad-mounted equipment.			
APM TULE-AES-4	Restriction of exterior lighting on the turbines to the aviation warning lights required by the FAA, which will be kept to the minimum required number and intensity to meet FAA standards.	Prior to Construction	BLM and FAA	Project design shall identify exterior lighting on the turbines to meet FAA requirements.			
APM TULE-AES-5	Placement of much of the Facility's electrical collection system underground (as much as possible), minimizing the system's visual impacts.	Prior to Construction	BLM	Project design shall include the placement of facilities electrical collection system underground as much as possible.			
APM TULE-AES-6	Use of a low-reflectivity finish for the exterior of the O&M facility building to maximize its visual integration into the surrounding landscape.	Prior to Construction	BLM	Project design shall identify use of a low-reflectivity finish for the exterior of the O&M facility building to maximize its visual integration into the surrounding landscape.			
APM TULE-AES-7	Restriction of outdoor night lighting at the O&M facility and the substation to the minimum required for safety and security; sensors and switches will be used to keep lighting turned off when not required, and all lights will be hooded and directed to minimize backscatter and off-site light trespass. In keeping with the San Diego County Dark Skies Ordinance, Class II lamp source and shielding requirements will be used to illuminate walkways, roadways, equipment yards, parking lots and outdoor security. Fully shielded low pressure sodium lighting will be used on outdoor fixtures to reduce or eliminate detrimental lighting impacts to nearby Astronomical Observatories.	Prior to Construction and Operation	BLM	Project design and operations shall restrict outdoor night lighting at the O&M facility and the substation to the minimum required for safety and security.			
APM TULE-AES-8	Use of a low-reflectivity finish for substation equipment to minimize its visual salience.	Prior to Construction	BLM	Project design shall identify the use of a low-reflectivity finish for substation equipment.			
APM TULE-AES-9	Use of dull gray porcelain insulators to reduce insulator visibility.	Prior to Construction	BLM	Project design shall identify the use of dull gray porcelain insulators.			
APM TULE-AES-10	Use of fencing with a dull finish around the substation to reduce the fence's contrast with the surroundings.	Prior to Construction	BLM and County of San Diego	Project design shall identify the use of a dull finish for the substation fencing.			
APM TULE-	Avoid trees to the extent practical.	Prior to and During	BLM	Avoidance of tress to the extent practical.			

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				Compliance Action	*Initials*	*Date*	*Remarks*
AES-11		Construction					
APM TULE-AES-12	The public shall be involved and informed about the visual site design elements of the proposed wind energy facilities. Possible approaches include conducting public forums for disseminating information, offering organized tours of operating wind developments, and using computer simulation and visualization techniques in public presentations.	Prior to and During Construction	BLM	Inform and involve the public about the visual site design elements.			
APM TULE-AES-13	Turbine arrays and turbine design shall be integrated with the surrounding landscape. Design elements to be addressed include visual uniformity, use of tubular towers, proportion and color of turbines, non-reflective paints, and prohibition of commercial messages on turbines.	Prior to Construction	BLM	Project design shall identify turbine arrays and turbine design integrated with the surrounding landscape.			
APM TULE-AES-14	Other site design elements shall be integrated with the surrounding landscape. Elements to address include minimizing the profile of the ancillary structures, burial of cables, prohibition of commercial symbols, and lighting. Regarding lighting, efforts shall be made to minimize the need for and amount of lighting on ancillary structures.	Prior to Construction	BLM	Project design shall identify elements to minimize the profile of the ancillary structures, burial of cables, prohibition of commercial symbols, and lighting.			
MM VIS-1a	**Reduce impacts at scenic highway and trail crossings**. At highway and trail crossings, structures shall be placed at the maximum feasible distance from the crossing to reduce visual impacts as long as other significant resources are not negatively affected.	Prior to Construction	BLM	Provide documentation and plans that demonstrate conformance with VIS-1a.			
MM VIS-1b	**Reduce impacts at scenic view areas.** In scenic view areas, as designated by the BLM, structures would be placed to avoid sensitive features and/or allow conductors to clearly span the features, within limits of standard design where feasible.	Prior to Construction	BLM	Provide documentation and plans that meet conditions as defined in VIS-1b.			
MM VIS-1c	**Avoid potential visibility of transmission structures and related facilities from sensitive viewing locations.** Underground portions of the 138 kV transmission line and/or collector system to avoid visual impacts to scenic highways, scenic vistas, or scenic resources	Prior to Construction	BLM	Provide documentation and plans that meet conditions as defined in VIS-1c.			
MM VIS-3a	**Reduce visibility of construction activities and equipment.** If visible from nearby roads, residences, public gathering areas, recreational areas, facilities, or trails, stationary construction sites and staging areas and fly yards shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Where practical, construction staging and storage will be screened with opaque fencing from close-range residential views. Additionally, construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use shall be avoided. Tule Wind, LLC shall submit final construction plans demonstrating compliance with this measure to the BLM, San Diego County, CSLC, BIA, and Ewiiaapaayp Band of Kumeyaay Indians for review and approval at least 60 days before the start of construction.	Construction	BLM	Temporary screening fencing placed at construction sites and staging areas visible from nearby sensitive receptors.			
MM VIS-3b	**Reduce construction night-lighting impacts.** Tule Wind, LLC shall design and install all lighting at construction and storage yards and staging areas and fly yards such that illumination of the project facilities, vicinity, and nighttime sky is minimized. Tule Wind, LLC shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the BLM, San Diego County, CSLC, BIA, and Ewiiaapaayp Band of Kumeyaay Indians (depending on the jurisdiction where the construction activities are being completed). The Plan shall include but is not necessarily limited to the following: • Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary;	Construction	BLM	Minimize night to the minimum necessary brightness and ensure high illumination areas are not occupied on a continuous basis.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
				Compliance Action	*Initials*	*Date*	*Remarks*
	• All lighting shall be of minimum necessary brightness consistent with worker safety; and • High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.						
MM VIS-3c	**Reduce construction impacts to natural features.** No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits.	Construction	BLM	No paint or permanent discoloring agents applied to rocks or vegetation.			
MM VIS-3d	**Reduce in-line views of land scars.** Construct access or spur roads at appropriate angles from the originating primary travel facilities to minimize extended in-line views of newly graded terrain, when feasible. Contour grading should be used where feasible to better blend graded surfaces with existing terrain. Tule Wind, LLC shall submit final construction plans demonstrating compliance with this measure to the appropriate land use jurisdiction agency for review and approval at least 60 days before the start of construction.	Prior to and During Construction	BLM	Submit final construction plans demonstrating compliance with MM VIS-3d.			
MM VIS-3e	**Reduce visual contrast from unnatural vegetation lines.** In those areas where views of land scars are unavoidable, the boundaries of disturbed areas shall be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for ongoing operation, maintenance, or access shall be returned to preconstruction conditions. In those cases where potential public access is opened by construction routes, Tule Wind, LLC shall create barriers or fences to prevent public access and patrol construction routes to prevent vandalized access and litter cleanup until all vegetation removed returns to its pre-project state. Tule Wind, LLC shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM, San Diego County, CSLC, BIA, and Ewiiaapaayp Band of Kumeyaay Indians (depending on the jurisdiction where the construction activities are being completed) for review and approval at least 60 days before the start of construction.	Construction	BLM	Submit final construction and restoration plans demonstrating compliance with MM VIS-3e.			
MM VIS-3f	**Minimize vegetation removal.** Only the minimum amount of vegetation necessary for construction of structures and facilities will be removed. Topsoil located in areas to be restored shall be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation. Topsoil located in developed or disturbed areas is excluded from this measure.	Construction	BLM	Ensure minimal amount of vegetation is removed and topsoil salvaging is conserved during excavation.			
MM VIS-3g	**Reduce visual contrast associated with substation and ancillary facilities.** Tule Wind, LLC shall submit to the BLM a Surface Treatment Plan describing the application of colors and textures to all new facility structure buildings, walls, fences, and components comprising all ancillary facilities including substations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Surface Treatment Plan shall be submitted to the BLM for approval at least 90 days before (a) ordering the first structures that are to be color treated during manufacture or (b) construction of any of the ancillary facility components, whichever comes first. If the BLM notifies Tule Wind, LLC that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, Tule Wind, LLC shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include: • Specification and 11" × 17" color simulations at life-size scale of the treatment proposed for use on project structures. including structures treated during manufacture • A list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified	Prior to Construction	BLM and County of San Diego	Submit final construction plans demonstrating compliance with MM VIS-3g.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
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	by name and by vendor brand or a universal designation) • Two sets of brochures and/or color chips for each proposed color • A detailed schedule for completion of the treatment • Procedures to ensure proper treatment maintenance for the life of the project. Tule Wind, LLC shall not specify to vendors the treatment of any buildings or structures treated during manufacture or perform the final treatment on any buildings or structures treated on site, until Tule Wind, LLC receives notification of approval of the Surface Treatment Plan by the BLM. Within 30 days following the start of commercial operation, Tule Wind, LLC shall notify the BLM that all buildings and structures are ready for inspection.						
MM VIS-3i	**Reduce potential visual contrast of transmission structures.** Tule Wind, LLC will use dulled-metal-finish transmission structures and non-specular conductors.	Prior to Construction	BLM	Submit final construction plans demonstrating compliance with MM VIS-3i.			
MM VIS-3j	**Reduce potential transmission conductor visibility and visual contrast**. The following design measures shall be applied to all new structure locations, conductors, and re-conductored spans to reduce the degree of visual contrast caused by the new facilities: • All new conductors and re-conductored spans are to be non-specular in design to reduce conductor visibility and visual contrast. • Where revisions would not conflict with existing design considerations to avoid sensitive resources (including hydrological, cultural, and biological resources), no new access roads shall be constructed such that they directly approach existing or proposed towers in a straight line from sensitive viewing locations immediately downhill of the structures.	Prior to Construction	BLM	Submit final construction plans demonstrating compliance with MM VIS-3j.			
MM VIS-3m	**Reduce visual impacts resulting from native tree removal.** In the event that ornamental or native trees within the project area will be removed due to project design and grading, the project applicant shall prepare a Tree Replacement Plan to be submitted with the Screening/Landscape Plan. The Tree Replacement Plan shall include but is not limited to the following: • Tree Removal Locations: Indicate the size, type, and location of each tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required.) • Assessment of the health and structural conditions, soils, tree size (trunk diameter, basal diameter, height, canopy spread), pest and disease presence, and accessibility of native oak trees to be removed due to project design and grading in order to determine whether existing trees can be transplanted outside the project footprint post-construction. If the assessment determines native oak trees can be transplanted, the oaks would be augmented with additional oak plantings in case the larger trees decline and are lost as a result of the relocation process. If native oak trees cannot be transplanted, the Tree Replacement Plan shall indicate the size, type, and location of each proposed replacement tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required). • Photos of the site and/or trees to be removed. • Oak replacement plan focusing on oak tree planting with smaller container trees at higher numbers, recommended at least 5:1 with 15-gallon size trees. The Tree Replacement Plan must minimize mature tree loss to the degree feasible. The Tree Replacement Plan shall be submitted to the appropriate land use jurisdiction agency for approval at least 90 days prior to planned tree removal. If BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians notifies the Tule Wind, LLC that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that	Prior to Planned Tree Removal	BLM	Develop and implement a Tree Replacement Plan, as defined in MM VIS-3m.			

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				Compliance Action	*Initials*	*Date*	*Remarks*
	notification, Tule Wind, LLC shall prepare and submit the revised Tree Replacement Plan for review and approval.						
MM VIS-3n	**Reduce potential visual impacts of wind turbines and ancillary facilities.** Tule Wind, LLC shall submit to the BLM, San Diego County, CSLC, BIA, and Ewiiaapaayp Band of Kumeyaay Indians (depending on the jurisdiction where the construction activities are being completed) a Surface Treatment Plan describing the design and application of colors and textures to all new wind turbine facilities, structure buildings, walls, fences, and components comprising all ancillary facilities including the collector station substation. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast to the degree feasible. The Treatment Plan shall be submitted to the BLM, San Diego County, CSLC, BIA, and Ewiiaapaayp Band of Kumeyaay Indians (depending on the jurisdiction where the construction activities are being completed) for approval at least 90 days before (a) ordering the first structures that are to be color treated during manufacture or (b) construction of any of the ancillary facility components, whichever comes first. If the BLM, San Diego County, CSLC, BIA, and Ewiiaapaayp Band of Kumeyaay Indians (depending on the jurisdiction where the construction activities are being completed) notifies Tule Wind, LLC that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, Tule Wind, LLC shall prepare and submit for review and approval a revised Plan.	Prior to Construction	BLM	Submit Surface Treatment Plan describing the design and application of colors and textures to all new wind turbine facilities as defined in VIS-3n.			
MM VIS-4a	**Reduce long-term night-lighting impacts from substations and ancillary facilities.** Tule Wind, LLC shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare, and illumination of the project facilities, vicinity, and nighttime sky is minimized. Tule Wind, LLC shall submit a Lighting Mitigation Plan to the BLM for review and approval at least 90 days before ordering any permanent exterior lighting fixtures or components. Tule Wind, LLC shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the BLM. The Plan shall include but is not necessarily limited to the following: • Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary. • All lighting shall be of minimum necessary brightness consistent with worker safety. • High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.	Prior to Construction and Operation	BLM	Submit final construction plans demonstrating compliance with MM VIS-4a.			
MM VIS-4b	**Incorporate Obstacle Collision Avoidance System (OCAS) onto Tule Wind Project wind turbines.** Following FAA approval, the project applicant shall install the OCAS lighting system on all proposed wind turbines in order to minimize nighttime lighting impacts attributed to the operation of FAA required obstruction lighting.	Post-Construction	BLM	Submit final construction plans demonstrating compliance with MM VIS-4b.			
Land Use							
MM LU-1a	**Prepare Construction Notification Plan.** Forty-five days prior to construction, Tule Wind, LLC shall prepare and submit a Construction Notification Plan to the BLM, San Diego County, CSLC, BIA, and Ewiiaapaayp Band of Kumeyaay Indians for approval. The plan shall identify the procedures that will be used to inform property owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include	Prior to Construction	BLM	Submit final construction plans demonstrating compliance with MM VIS-4b.			

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	text of proposed public notices and advertisements. The plan shall address at a minimum two of the following components: • Public notice mailer. A public notice mailer shall be prepared and mailed no less than 15 days prior to construction. The notice shall identify construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties. The notice shall state the type of construction activities that will be conducted and the location and duration of construction, including all helicopter activities. Tule Wind, LLC shall mail the notice to all residents or property owners within 1,000 feet of project components. If construction delays of more than 7 days occur, an additional notice shall be prepared and distributed. • Newspaper advertisements. Fifteen days prior to construction within a route segment, notices shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins. The notice shall state when and where construction will occur and provide information about the public liaison person and identify the hotline. If construction is delayed for more than 7 days, an additional round of newspaper notices shall be placed to discuss the status and schedule of construction. • Public venue notices. Thirty days prior to construction, notice of construction shall be posted at public venues such as libraries, community notification boards, post offices, rest stops, community centers, and other public venues to inform affected residents about the purpose and schedule of construction activities. • Public liaison person and toll-free information hotline. Tule Wind, LLC shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbances. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. Tule Wind, LLC shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.						
MM LU-1b	**Notify property owners and provide access.** To facilitate access to properties obstructed by construction activities, Tule Wind, LLC shall notify property owners and tenants at least 24 hours in advance of construction activities and shall provide alternative access if required.	Construction	BLM	• Provide notification at least 24 hours in advance of construction activities. • Provide alternative access if required to properties obstructed by construction activities.			
Wilderness and Recreation							
APM TULE-REC-1	Provide improvements to the Lark Canyon and Cottonwood Campgrounds, as follows: • Roadways into the campgrounds upgraded to accommodate trailers • Trail signs and maps • Additional BBQ circles and grates.	Prior to Construction	BLM	Complete improvements to the Lark Canyon and Cottonwood Campgrounds.			
APM TULE-REC-2	Provide signage for potential campground and OHV area closures.	Prior to Construction	BLM	Signage provided for potential campground and OHV area closures.			
MM WR-1	**Provide notice for access restrictions or anticipated closures to wilderness and recreation areas.** Tule Wind, LLC shall coordinate with the BLM to ensure that proper signage is posted in advance for any access restriction and/or anticipated closures of wilderness and recreation areas so that recreational users may plan accordingly. Signage shall be posted 30 days prior to construction at public venues such as rest stops, resource management offices, and along access	Construction	BLM	Coordinate with the BLM to ensure that proper signage is posted in advance for any access restriction and/or anticipated closures of wilderness and recreation areas.			

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	routes to known recreational destinations that would be restricted, blocked, or detoured. Notices shall provide information on alternative recreation areas that may be used during the closure of these facilities.						
MM WR-2	**Maintain access along McCain Valley Road.** Tule Wind, LLC shall coordinate with the BLM to ensure that access is maintained to wilderness and recreation areas within the McCain Valley area during construction. Tule Wind, LLC shall provide adequate turnouts along McCain Valley Road such that visitors to the area may utilize the roadway to access recreational areas. In addition, the project applicant shall ensure that construction vehicles and equipment are not left in McCain Valley Road so as to obstruct the movement of non-construction vehicles in the area.	Construction	BLM	Ensure access is maintained to wilderness and recreation areas within the McCain Valley area during construction.			
Cultural and Paleontological Resources							
APM TULE-CUL-1	For each cultural or archaeological resource, a qualified archaeologist will clearly designate its boundaries with marker flags. The markers will not be distinguishable from other sensitive resources to be avoided.	Construction	BLM	Ensure a cultural or archeological monitor clearly delineates boundaries of cultural sites prior to construction.			
APM TULE-CUL-2	The construction crew will be made aware of all areas to avoid, including cultural or archaeological site locations.	Construction	BLM	Ensure all crews are aware of areas to avoid during construction that contain cultural sites.			
APM TULE-CUL-3	Construction activities will avoid any flagged cultural or archaeological resource sites.	Construction	BLM	Avoidance of cultural sites during construction.			
APM TULE-CUL-4	Work will stop if cultural resources are discovered during ground-disturbing activities. If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or nonhuman bone are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. The construction contractor and lead contractor compliance inspector will verify that work is halted until appropriate treatment measures are implemented.	Construction	BLM	Stop work in the event cultural resources are discovered during construction.			
APM TULE-CUL-5	If human remains of Native American origin are discovered during ground-disturbing activities, it is necessary to comply with state laws relating to the disposition of Native American burials, which falls within the jurisdiction of the Native American Heritage Commission. If human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation of disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: (1) the San Diego County corner has been informed and has determined that no investigation of the cause of death is required; and (2) if the remains are of Native American origin: a) The descendants of the deceased Native Americans have made a recommendation to the land owner of the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Pub. Res. Code Sec. 5097.98, or b) The Native American Heritage Commission was unable to identify a descendant of the descendant failed to make a recommendation within 24 hours after being notified by the commission.	Construction	BLM	In the event human remains are discovered implement measures as defined in APM-TULE-5.			
MM CUL-1A	**Develop and Implement a Historic Properties Treatment Plan-Cultural Resources Management Plan.** A Historic Properties Treatment Plan–Cultural Resources Management Program (HPTP-CRMP) shall be prepared to avoid or	Construction	BLM	Develop and Implement a Historic Properties Treatment Plan-Cultural Resources Management Plan			

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	mitigate impacts for significant cultural resources pursuant to Section 106 Guidelines. An MOA shall be developed among all federal, state, and local agencies to implement the HPTP-CRMP. As part of the HPTP-CRMP, recorded cultural resources that can be avoided shall be listed and demarcated during construction as Environmentally Sensitive Areas (ESAs). All recommended NRHP- and/or CRHR-eligible resources that would not be affected by direct impacts, but are within 100 feet of direct impact areas, shall be designated as ESAs. Protective fencing or other markers shall be erected and maintained to protect ESAs from inadvertent trespass for the duration of construction in the vicinity. An archaeologist shall monitor during ground-disturbing activities at all cultural resource ESAs. The HPTP-CRMP shall also define any additional areas that are considered to be of high sensitivity for discovery of buried NRHP-eligible historic properties and CRHR-eligible historic resources, including burials, cremations, or sacred features. These areas of high-sensitivity shall also be monitored by qualified archaeologists during construction. If recommended NRHP-eligible historic properties and CRHR-eligible historic resources are not avoidable, the HPTP-CRMP shall provide a process for evaluating NRHP and CRHR eligibility, consulting with Native Americans about site treatment, working with engineers to avoid resources; suggest various options for reducing adverse effects; and outline a data recovery mitigation plan that would include research design, field sampling, laboratory analysis, reporting, curation, and dissemination of results. Other treatment measures to resolve adverse effects could include but are not limited to historical documentation, photography, collection and publishing of oral histories, field work to gather information for research purposes or some form of public awareness or interpretation. A description of alternative treatments to resolve adverse effects other than data recovery excavations could also include: • Relocation of construction components to portions of historic properties that do not contribute to the qualities that make the resource eligible for the NRHP and CRHR; • Deeding cemetery or other sensitive areas into open space in perpetuity and providing necessary long-term protection measures; • Public interpretation including the preparation of a public version of the cultural resources studies and/or education materials for local schools; • Providing Native American tribes future access to traditional and cultural areas on the Project site after completion of Project construction; and • Tule Wind, LLC financial support of existing cultural centers for the preparation of interpretive displays. The HPTP-CRMP shall include provisions for reporting and curation of artifacts and data at a facility that is approved by the agency. Tule Wind, LLC shall attempt to gain permission for artifacts from privately held land to be curated with the other project collections. As part of the HPTP-CRMP, processing of all collected cultural remains shall be described. All artifacts shall be analyzed to identify function and chronology as they relate to the history of the area. Faunal material shall be identified as to species. A Native American monitor may be required at culturally sensitive locations specified by the lead agency following government-to-government consultation with Native American tribes. The monitoring plan in the CRMP shall indicate the locations where Native American monitors shall be required.						
MM CUL-1B	**Avoid and Protect Significant Resources.** Tule Wind, LLC shall design and implement a long-term management plan to protect NRHP-eligible, CRHR-eligible	Prior to and During Construction	BLM, County, CSLC,	Develop and implement a long-term management plan to protect significant			

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	sites or sites treated as eligible for project management purposes from direct impacts of project operation and maintenance and from indirect impacts (such as erosion and access) that could result from the presence of the project. The plan shall be developed in consultation with the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians and other consulting parties to design measures that shall be effective against project maintenance impacts, such as vegetation clearing and road and tower maintenance, and project-related vehicular impacts. The plan shall also include context for understanding the cultural resources within the ROW and describe how protective measures for cultural resources within the ROW or main project area that may experience operational and access impacts as a result of the project. Measures considered shall include demarcation of Environmentally Sensitive Areas (ESAs) during any subsequent project construction or maintenance activities for all historic properties within 50 feet of direct impact areas, permanent restrictive fencing or gates, permanent access road closures, signage, stabilization of potential erosive areas, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting the resources. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to resources. Monitoring of sites selected during consultation with BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians shall be conducted annually by a professional archaeologist for a minimum period of 5 years. Monitoring shall include inspection of all site loci and defined surface features, documented by photographs from fixed photo monitoring stations and written observations. A monitoring report shall be submitted to the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians within 1 month following the annual resource monitoring. The report shall indicate any properties that have been affected by erosion, unauthorized excavation or collecting or vehicle or maintenance impacts. For properties that have been impacted, Tule Wind, LLC shall provide recommendations for mitigating impacts and for improving protective measures. After 5 years of resource monitoring, the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians shall evaluate the effectiveness of the protective measures and the monitoring program. Based on that evaluation, the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians may require that Tule Wind, LLC revise or refine the protective measures, or alter the monitoring protocol or schedule. If the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians does not authorize alteration of the monitoring protocol or schedule, those shall remain in effect for the duration of the project operation. If annual monitoring program identifies adverse effects to properties eligible for listing on the NRHP and CRHR from operation or long-term presence of the project, or if, at any time, Tule Wind, LLC, the BLM, San Diego County, CSLC, or the BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians become aware of such adverse effects Tule Wind, LLC shall notify the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians immediately and implement additional protective measures, as directed by the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians. At the discretion of the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians such measures may include, but not be limited to, refinement of monitoring protocols, data-recover investigations, or payment of		BIA/Ewiiaapaayp Band of Kumeyaay Indians	cultural resources as defined in MM CUL-1B.			

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	compensatory damages in the form of nondestructive cultural resource studies or protection.						
MM CUL-1C	**Training for Contractor.** All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. The Applicant shall complete training for all construction personnel and retain documentation showing when training of personnel was completed. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that shall be avoided, and that travel and construction activity shall be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the ROW by Tule Wind, LLC, its representatives, or employees shall not be allowed. Violators shall be subject to prosecution under the appropriate State and federal laws, and violations shall be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction: • All construction contracts shall require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources. • Tule Wind, LLC shall provide training for supervisory construction personnel describing the potential for exposing cultural resources and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources.	Prior to Construction	BLM	Conduct training for contractor as defined in CUL-1C.			
MM CUL-1D	**Construction Monitoring.** Prior to issuance of a Notice to Proceed, Tule Wind, LLC shall identify and retain a qualified archaeologist, in accordance with the Secretary of the Interior's Standards and Guidelines (Secretary's Standards) (36 CFR 61). A qualified archaeologist shall attend preconstruction meetings, as needed, to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring shall be noted on the construction plans. All construction activities in environmentally sensitive areas, or any other area of the project deemed sensitive for containing cultural resources, shall be monitored by a qualified archaeologist. Since significant portions of the project site contain sedimentary deposits that have the potential to contain buried cultural resources, then full-time cultural resources monitoring shall be implemented during all phases of ground-disturbing work in these areas. A cultural resource monitor shall meet the Secretary of the Interior Standards Qualifications as a professional archaeologist and, as appropriate, shall be on the lead agencies approved consultants list. The archaeological monitor(s) shall also be familiar with the project area and, therefore, be capable of anticipating the types of cultural resources that may be encountered.	Prior to Construction	BLM	Retain qualified archeologist to conduct monitoring in environmentally sensitive areas.			
MM CUL-1E	**Discovery of Unknown Resources.** In the event that previously unknown cultural resources are discovered, the archaeologist shall have the authority to divert or	Construction	BLM	Develop and implement CRMP in the event previously unknown cultural resources are			

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	temporarily halt ground disturbance to allow evaluation of recommended significant cultural resources. The process for handling inadvertent discoveries shall be documented in the CRMP. It shall detail the methods, consultation procedures, and timelines for assessing register eligibility, formulating a mitigation plan, and implementing treatment should avoidance and protection of the resource not be possible. Mitigation and treatment plans for unanticipated discoveries shall be approved by the agency and SHPO prior to implementation. The archaeologist in coordination with the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians shall evaluate the significance of the discovered resources based on eligibility for the NRHP, CRHR, or local registers. Preliminary determinations of NRHP eligibility shall be made by the BLM, in consultation with other appropriate agencies and local governments, and the SHPO.			discovered.			
MM CUL-1F	**Control Unauthorized Access.** Tule Wind, LLC shall coordinate with the authorized officer of the BLM or, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians at least 60 days before construction in order to determine if gates shall be installed on access roads, especially trails that would be dually used as access roads, to prevent unauthorized vehicular access to the ROW. Gate installation shall be required at the discretion of the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians. On trails proposed for dual use as access roads, gates shall be wide enough to allow horses, bicycles, and pedestrians to pass through. Tule Wind, LLC shall document its coordination efforts with the administering agency of the road/trail and provide this documentation to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians 30 days prior to construction. Signs prohibiting unauthorized use of the access roads shall be posted on the installed gates.	Prior to Construction	BLM	Coordinate with authorized officer of the BLM to determine measures to prevent unauthorized access.			
MM CUL-1G	**Funding of Law Enforcement Patrols.** To control unauthorized use of project access roads and to provide for the general protection of cultural and natural resources made more accessible as a result of the project facilities, Tule Wind, LLC shall provide funding to the BLM for law enforcement patrols for the term of the ROW. The BLM shall formulate what funding is reasonable to implement the above.	Prior to Construction	BLM	Funding for law enforcement patrols to control unauthorized use of project access roads.			
MM CUL-1H	**Continue Consultation with Native Americans and Other Traditional Groups.** Tule Wind, LLC shall provide assistance to the BLM to continue required government to government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994, and Section 106 of the National Historic Preservation Act) and other traditional groups to identify and assess or mitigate the impact of the approved project on traditional cultural properties or other resources of Native American concern, such as sacred sites and landscapes, or areas of traditional plant gathering for food, medicine, basket weaving, or ceremonial uses. As directed by the BLM, Tule Wind, LLC shall undertake required treatments, studies, or other actions that result from such consultation. Actions that are required during or after construction shall be defined, detailed, and scheduled in the HPTP-CRMP and implemented by Tule Wind, LLC. Tule Wind, LLC is required to conform to the terms and conditions of the approved Memorandum of Agreement for the Tule Wind Project, as well as the HPTP-CRMP prepared for the project.	Prior to, During, and Post-Construction	BLM	Continue government-to-government consultation with Native Americans and other traditional groups. Conform to the Tule Memorandum of Agreement and HPTP-CRMP.			
MM CUL-2	**Human Remains.** All locations of known Native American human remains shall be avoided through project design and designation as ESAs if within 100 feet of project components. During construction, if human remains are encountered,	Construction	BLM	• Placement of fencing at locations of known Native American human remains.			

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	Native American consultation consistent with NAGPRA shall be undertaken. In addition, if human remains are encountered on non-federal (state, county, or private) lands, California Health and Safety Code §7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code §5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within a reasonable time frame. Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code §5097.98. Avoidance and protection of inadvertent discoveries which contain human remains shall be the preferred protection strategy with complete avoidance of impacts to such resources protected from direct project impacts by project redesign. Tule Wind, LLC shall follow all State and federal laws, statutes, and regulations that govern the treatment of human remains. Tule Wind, LLC shall comply with and implement all required actions and studies that result from such consultations, as directed by the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians.			• In the event human remains are encountered, implement measures as defined in CUL-2.			
MM PALEO-1A	**Inventory and evaluate paleontological resources in the Final APE.** Prior to construction, Tule Wind, LLC shall conduct and submit to the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians for approval an inventory of significant paleontological resources within the affected area, based on field surveys of areas identified as marginal through high or undetermined paleontological sensitivity potential.	Prior to Construction	BLM	Submit Final APE to BLM identifying areas of paleontological sensitivity.			
MM PALEO-1B	**Develop Paleontological Monitoring and Treatment Plan.** Following completion and approval of the paleontological resources inventory and prior to construction, Tule Wind, LLC shall prepare and submit to the BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians for approval a Paleontological Monitoring Treatment Plan (Plan). The Plan shall be designed by a Qualified Paleontologist and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements, including BLM and County of San Diego Paleontological Resource Guidelines. The qualified paleontologist shall have an MA or PhD in paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques. The Plan shall identify construction impact areas of moderate to high sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. The Plan shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sediments determined to have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist). Sediments with zero sensitivity will not require paleontological monitoring. The Qualified Paleontologist shall have a BA in Geology or Paleontology, and a minimum of 1 year of monitoring experience in local sediments. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the applicant on public land shall be	Prior to Construction	BLM	Prepare and implement Paleontological Monitoring Treatment Plan.			

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	carried out by qualified paleontologists with the appropriate current permits, including, but not limited to, a Paleontological Resources Use Permit (for work on public lands administered by BLM). Notices to proceed shall be issued by the lead agency and other agencies with jurisdiction, following approval of the Paleontological Monitoring and Treatment Plan.						
MM PALEO-1C	**Monitor Construction for Paleontology.** Based on the paleontological sensitivity assessment and Paleontological Monitoring and Treatment Plan consistent with Mitigation Measure PALEO-01b (Develop Paleontological Monitoring and Treatment Plan), Tule Wind, LLC shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have moderate (PFYC - Class 3) to high (PFYC - Class 4) paleontological sensitivity within the Tule Wind Project site. Sediments of low, marginal (i.e., PFYC – Class 2), or, undetermined (PFYC Class 3) sensitivity shall be monitored by a qualified paleontological monitor on a part-time basis (as determined by the Qualified Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Qualified Paleontologist.	Construction	BLM	Conduct paleontological monitoring in areas of paleontological sensitivity in accordance with the Paleontological Monitoring and Treatment Plan.			
MM PALEO-1D	**Conduct Paleontological Data Recovery.** If avoidance of significant paleontological resources is not feasible or appropriate based on project design, treatment (including recovery, specimen preparation, data analysis, curation, and reporting) shall be carried out by the project, in accordance with the approved Treatment Plan per Mitigation Measure PALEO-01B (Develop Paleontological Monitoring and Treatment Plan).	Construction	BLM	Implement measures as defined in the Paleontological Monitoring and Treatment Plan if resources are discovered during construction.			
MM PALEO-1E	**Train Construction Personnel.** Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. The project shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Training shall inform all construction personnel that Environmentally Sensitive Areas include areas determined to be paleontologically sensitive, as defined on the paleontological sensitivity maps for the project, and must be avoided, and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the ROW by the project, its representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate state and federal laws, and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop-work order. The following issues shall be addressed in training or in preparation for construction: • All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing subsurface paleontological resources, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources. • The project shall provide a background briefing for supervisory personnel describing the potential for exposing paleontological resources, the location of any potential Environmentally Sensitive Areas, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils. • Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted, and the	Prior to Construction	BLM	Conduct training prior to construction with all construction personnel regarding recognition of possible subsurface paleontological resources and protection of paleontological resources during construction.			

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	project paleontologist shall be notified. Once the find has been inspected and a preliminary assessment made, the project paleontologist will notify the lead agency and other appropriate land managers and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure PALEO-1B (Develop Paleontological Monitoring and Treatment Plan).						
Noise							
APM TULE-NOI-1	Turbines will be situated to minimize the amount of potential noise to surrounding residential structures.	Prior to Construction	BLM and County of San Diego	Project design shall identify turbine locations that minimize the amount of potential noise to surrounding residences.			
APM TULE-NOI-2	A site-specific noise mitigation plan will be developed prior to construction.	Prior to Construction	BLM and County of San Diego	Prepare a site-specific noise mitigation plan.			
APM TULE-NOI-3	A blasting plan will be prepared for each potentially impacted site. Depending upon the results of the blasting plan, mitigation measures may include coordination with building occupants so that blasting occurs in their absence, or at other acceptable times, to avoid nuisance or annoyance complaints. A rock anchoring or mini-pile system may be used to reduce the risk of damage to structures. Structures shall be restored if adversely affected by construction vibration, to an equivalent condition as that prior to the construction. Fair compensation for lost use will be provided to the owner. The project operator will notify nearby landowners of certain construction noise events in advance (e.g., if temporary blasting becomes necessary).	Prior to Construction	BLM	Prepare a blasting plan and implement measures as defined in APM-TULE-NOI-3.			
APM TULE-NOI-4	Decrease the amount of noise during construction to the greatest extent possible, including the use of appropriate mufflers and limiting the hours of construction. All stationary construction equipment will be located as far as practicable from nearby residences and other human activities.	During Construction	BLM	Decrease noise during construction to the greatest extent feasible as defined in APM TULE-NOI-4.			
APM TULE-NOI-5	Turbines will be kept in good running order throughout the operational life of the project.	Operation	BLM	Maintain turbines throughout operation.			
APM TULE-NOI-6	The project operator will notify nearby landowners of certain construction noise events in advance (e.g., if temporary blasting becomes necessary).	During Construction	BLM	Provide nearby landowners notice prior to noisy construction activities.			
APM TULE-NOI-7	Requiring original equipment manufacturer (OEM) or higher-performing mufflers on equipment.	During Construction	BLM	Require OEM or higher-performing mufflers on equipment.			
APM TULE-NOI-8	Requiring the regular maintenance and inspection of construction machinery to allow for quieter operation.	During Construction	BLM	Maintain construction equipment to allow for quieter operation.			
APM TULE-NOI-9	Augmented backup alarms coupled with contractor observation to minimize alarm noise, which is a consistent area of concern and complaint on most construction projects.	During Construction	BLM	Augmented backup alarms to minimize backup alarm noise.			
APM TULE-NOI-10	Exhaust silencers used on machinery during construction to further reduce noise.	During Construction	BLM	Exhaust silencers on machinery during construction.			
APM TULE-NOI-12	Utilize noise barriers and machinery enclosures where feasible.	During Construction	BLM	Utilize noise barriers and machinery enclosures.			
APM TULE-NOI-13	Ban the use of “Jake Braking” or engine compression braking on all trucks.	During Construction	BLM	Prohibit use of Jake Braking or engine compression braking on trucks.			
APM TULE-NOI-14	Specifying the proper usage and power for the particular construction procedure (no machinery overkill).	During Construction	BLM	Proper usage and power for the particular construction procedure.			
APM TULE-NOI-15	Implement a complaint resolution procedure to assure that any complaints regarding construction or operational noise are promptly and adequately investigated and resolved.	During Construction	BLM	Implement a complaint resolution procedure throughout construction.			

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APM TULE-NOI-16	Construction equipment or stationary equipment not actively being used will not idle for more than 5 minutes.	During Construction	BLM	Equipment will not idle for more than 5 minutes.			
MM NOI-1	**Blasting Plan.** Tule Wind, LLC will prepare a blasting plan that will reduce impacts associated with construction-related noise and vibrations related to blasting. The blasting plan will be site specific, based on general and exact locations of required blasting and the results of a project-specific geotechnical investigation. The blasting plan will include a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and calculations to determine the area affected by the planned blasting. Noise calculations in the blasting plan will account for blasting activities and all supplemental construction equipment. The final blasting plan and pre-blast survey shall meet the requirements provided below, as well as those outlined in Mitigation Measure HAZ-4b. The blasting plan will include a schedule to demonstrate, where feasible, construction blasting to occur infrequently enough that it will not exceed the County's impulsive noise standard because blasting would not occur for more than 25% (15 minutes) during a 1-hour period due to the short time duration of a blast. Where this is not possible, other construction blasting would be coordinated with impacted building occupants to occur in their absence, or at other acceptable times, to avoid nuisance or annoyance complaints. If necessary the applicant will temporarily relocate impacted residents on an as-needed basis for the duration of the blasting activities. The applicant will be responsible for temporary relocation expenses (i.e.; expenses for temporary housing) incurred by impacted residents if relocation is necessary during blasting activities. To ensure that potentially impacted residents are informed, the applicant will provide notice by mail to all property owners within 300 feet of the project at least 1 week prior to the start of construction activities. Blasting would be completed between 7 a.m. and 7 p.m. to be compliant with County noise ordinances. A rock anchoring or min-pile system may be used to reduce the risk of damage to structures during blasting activities. Fair compensation for lost use will be provided to the property owner. Physical damage to potentially vulnerable structures will be addressed by avoiding construction blasting near the structures wherever possible, and, if necessary, non-blasting construction methods will be evaluated. If adversely affected, structures shall be restored to an equivalent condition, and fair compensation for lost use will be provided to the owner. If necessary, portable noise barriers to reduce excessive noise impacts shall be used between the source and affected occupied properties. Noise barriers that break the line of sight would provide 5 dB attenuation. Increasing the height of the barrier would increase the attenuation of the barrier. A 5 dBA to 10 dBA attenuation is considered reasonably feasible. Supplemental construction equipment, such as drill rigs, may be used to support blasting. At a distance of 80 feet, drill rig noise emissions are approximately 75 dBA Leq. Drill rigs, without mitigation, have the potential to cause temporary noise impacts if used less than 80 feet from the property line of an occupied residence. The blasting plan will include measures to reduce noise impacts resulting from the use of drill rigs at less than 80 feet from a property line. Such measures may include temporary noise barriers or limited hours of operation to reduce the impact to within the County standard.	Prior to Construction	BLM	Prepare and implement blasting plan as defined in MM NOI-1.			
MM NOI-3	**Site-specific noise mitigation plan.** Prior to construction, a site-specific noise mitigation plan will be developed to ensure that noise from turbines will not adversely impact surrounding residences. The noise mitigation plan will ensure that operations of the turbines will comply with County General Plan Policy 4b and County Noise Ordinance Section 36.404. Mitigation of the turbine noise may	Prior to Construction	BLM	Prepare and implement a site-specific noise mitigation plan.			

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	include revising the turbine layout, curtailment of nighttime use of selected turbines, utilization of an alternate turbine manufacturer (or combination of manufacturers), implementation of noise reduction technology, or other methods of compliance with applicable noise standards. The plan will also demonstrate how the project will maintain the turbines so that they will be kept in good running order throughout the operational life of the project and would not create noise levels due to deterioration that would violate County standards.						
Transportation and Traffic							
APM TULE TRAF-1	A transportation plan shall be developed, particularly for the transport of turbine components, main assembly cranes, and other large pieces of equipment. The plan shall consider specific object sizes, weights, origin, destination, and unique handling requirements and shall evaluate alternative transportation approaches.	Prior to Construction	BLM	Prepare a transportation plan for the transport of heavy equipment to the project site.			
APM TULE TRAF-2	A traffic management plan shall be prepared for the site access roads to limit the potential for hazards from the increased truck traffic and ensure that traffic flow would not be adversely impacted. This plan shall incorporate measures such as informational signs, flaggers when equipment may result in blocked throughways, and traffic cones to identify any necessary changes in temporary lane configuration.	Prior to Construction	BLM	Prepare a traffic management plan to limit the potential for hazards from the increased truck traffic.			
APM TULE-TRAF-3	The following has been requested by Caltrans as part of the project design: • All Caltrans standards for utility encroachments shall be met. • Clearances of overhead crossings shall conform to regulations of the California PUC, and the number of crossings to be minimized. • New installations under an existing paved roadbed shall be made by the boring and jacking method. Trenching under the traveled paved roadway will not be allowed. • For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled access rights-or-way. • Utilities shall not be located in median areas. • Transverse crossings should be normal (90 degrees) to the highway alignment where practical. If impractical, skews of up to 30 degrees from normal may be allowed. • Supports for overhead lines crossing freeways shall be located outside the controlled access right-of-way and not on cut or fill slopes and shall not impair sight distances. All installations shall be placed as close to the right-of –way line as possible. Above-ground utilities shall be outside of the clear recovery zone (20 feet from edge-or-travel way for conventional highways and 30 feet for freeways and expressways). Allowance should be made for future widening of the highways. • New installations shall not impair sight distances.	Prior to Construction	BLM	Provide project design that includes measures as defined in APM TULE TRAF-3.			
MM TRA-1	**Prepare and implement a Traffic Control Plan.** At minimum, the plan will include the following: • Tule Wind, LLC shall encourage carpooling to the construction site to reduce personal vehicle traffic in the project area to the greatest extent possible. • Tule Wind, LLC will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches. • Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar	Prior to Construction	BLM	Prepare and implement a Traffic Control Plan as defined in MM TRA-1.			

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	shall be implemented to identify any necessary changes in temporary lane configuration. • Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used. • All Caltrans' standards for utility encroachments shall be met. • The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual. • Clearances or overhead crossings shall conform to regulations of San Diego County, BLM, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians depending on the jurisdiction where the construction activities are being completed and the number of crossings shall be minimized. • New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur. • For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access ROWs. • Utilities shall not be located in median areas. • Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed. • Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways. • New installations shall not impair sight distances. • Tule Wind, LLC shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts. • Tule Wind, LLC shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. Tule Wind, LLC shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness. Tule Wind, LLC shall provide a draft copy of the Traffic Control Plan to the agencies listed for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to the Tule Wind, LLC, and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians depending on the jurisdiction where the construction activities are being completed with input from commenting agencies and provided to Tule Wind, LLC for implementation during all construction activities.						
MM TRA-2	**Repair roadways damaged by construction activities.** If damage to roads occurs, Tule Wind, LLC shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired at Tule Wind, LLC's cost. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside	Construction	BLM	• Complete roadway repairs as defined in MM TRA-2. • Protect roadside drainage structures and drainage features by regarding and reconstruction roads to drain properly.			

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	drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.						
MM TRA-3	**Consult with and inform FAA, DOD, and U.S. Customs and Border Protection.** Tule Wind, LLC shall consult with the FAA, DOD, and U.S. Customs and Border Protection (San Diego Sector) to avoid potential safety issues associated with proximity to airports, military bases or training area, and landing strips and to determine where Border Protection aircraft operate in the County. Prior to construction, Tule Wind, LLC shall provide written notification to the FAA, the U.S. Air Force Regional Environmental Coordinator (or appropriate DOD representative), U.S. Customs and Border Protection (San Diego Sector), and the BLM and San Diego County, stating when and where the new transmission lines, towers, and wind turbines will be erected, and shall install markers as requested by U.S. Customs and Border Protection or FAA. Tule Wind, LLC shall also provide all agencies listed above with aerial photos or topographic maps clearly showing the new lines, towers, and wind turbines.	Prior to Construction	BLM	Provide written notification to the FAA, the U.S. Air Force Regional Environmental Coordinator (or appropriate DOD representative), U.S. Customs and Border Protection (San Diego Sector), and the BLM and San Diego County, stating when and where the new transmission lines, towers, and wind turbines will be erected, and placement of markers as requested by U.S. Customs and Border Protection or FAA.			
Public Health and Safety							
APM TULE-HAZ-1	Spill Prevention, Control and Countermeasure Plan. The Spill Prevention, Control, and Countermeasure plan shall identify where hazardous materials and waste will be stored on-site, what spill prevention measures will be implemented, the location of spill kits, the appropriate spill response action for each material or waste, and procedures for notification to the appropriate authorities.	Prior to Construction	BLM	Prepare a Spill Prevention, Control and Countermeasure Plan.			
APM TULE-HAZ-2	Hazardous Materials Management Plan. The Hazardous Materials Management Plan shall include storage, use, transportation, and disposal procedures of each hazardous material anticipated to be used at the site. The plan will establish; inspection procedures, storage requirements, storage quantity limits, inventory control, nonhazardous product substitutes, and disposition of excess materials. The hazardous materials management plan will also identify requirements for notices to federal and local emergency response authorities, and will include emergency response plans.	Prior to Construction	BLM	Prepare a Hazardous Materials Management Plan.			
APM TULE-HAZ-3	Waste Management Plan. The waste management plan shall determine waste procedures, waste storage locations, waste-specific management and disposal requirements, inspection procedures, and waste minimization procedures.	Prior to Construction	BLM	Prepare a Waste Management Plan.			
MM HAZ-1a	**Hazardous Materials Management Plan.** Prior to approval of final construction plans, Tule Wind, LLC shall prepare an HMMP for the construction phase of the project, which shall be reviewed and approved by the appropriate agency, and shall include the following components: • The plan shall identify all hazardous materials that will be present on any portion of the construction site, including, but not limited to, fuels, solvents, and petroleum products. The plan shall address storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site. The plan shall establish inspection procedures, storage requirements, storage quantity limits, inventory control, non-hazardous product substitutes, and disposition of excess materials. • The plan shall identify secondary containment and spill prevention countermeasures, as well as a contingency plan to identify potential spill hazards, how to prevent their occurrence, and responses for different quantities of spills that may occur. Secondary containment and countermeasures shall be in place throughout construction so that if any leaks	Prior to Construction	BLM	Prepare and implement Hazardous Materials Management Plan as defined in MM HAZ-1a.			

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	or spills occur, responses will be made immediately. • The plan shall identify materials (and their locations) that will be on site and readily accessible to clean up small spills (i.e., spill kit, absorbent pads, and shovels). Such emergency spill supplies and equipment shall be clearly marked and located adjacent to all areas of work and in construction staging areas. The plan shall identify the spill-response materials that must be maintained in vehicles and substation sites during construction and procedures for notification to the appropriate authorities. • The plan shall identify adequate safety and fire suppression devices for construction-related activities involving toxic, flammable, or explosive materials (including refueling construction vehicles and equipment). Such devices shall be readily accessible on the project site, as specified by the County's Fire Department and per the Uniform Building Code and Uniform Fire Code. The plan shall be included as part of all contractor specifications and final construction plans to the satisfaction of the appropriate agency. The plan shall also identify requirements for notices to federal and local emergency response authorities, and shall include emergency response plans. Prior to construction, all contractor and subcontractor personnel shall receive training regarding the components of the HMMP, as well as applicable environmental laws and regulations related to hazardous materials handling, storage, and spill prevention and response measures. Tule Wind, LLC shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities. The plan shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians at least 30 days prior to construction.						
MM HAZ-1b	**Health and Safety Program.** Prior to approval of final construction plans, Tule Wind, LLC shall prepare a Health and Safety Program for each applicable phase of the project (i.e., construction, operation, and decommissioning). The program shall be developed to protect both workers and the general public during all phases of the project. The program shall be implemented to educate construction workers about the hazards associated with the particular project site and the safety measures that must be taken to prevent injury. The program shall include standards regarding occupational safety, safe work practices for each task, hazard training requirements for workers, and mechanisms for documentation and reporting. Regarding occupational health and safety, the program should identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; OSHA standard practices for safe use of explosives and blasting agents; and measures for reducing occupational EMF exposures); establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards). The program should include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. The program should include worker training regarding how to identify potentially contaminated soils and/or groundwater. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies should be established. The program should identify requirements for temporary fencing around staging areas, storage yards, and excavation areas during construction or decommissioning activities. Such fencing shall be designed to restrict transient traffic, off-highway vehicle (OHV) use, and the general public from accessing areas under construction	Prior to Construction	BLM	Prepare and implement Health and Safety Program as defined in MM HAZ-1b.			

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	and should be removed once construction or decommissioning activities are complete. The program should also identify appropriate measures to be taken during operation of the project to limit public access to hazardous facilities (e.g., permanent fencing, locked access). In order to inform workers and the general public of the dangers of abandoned mines, pamphlets with the "Stay Out-Stay Alive" information used by federal and state governments should be distributed as part of the program. Tule Wind, LLC shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the program for all construction activities. The program shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians at least 30 days prior to construction.						
MM HAZ-1c	**Waste Management Plan.** Prior to approval of final construction plans, Tule Wind, LLC shall prepare a Waste Management Plan, which shall determine waste procedures, waste storage locations, waste-specific management and disposal requirements, inspection procedures, and waste minimization procedures. Tule Wind, LLC shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities. The plan shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians, depending on the jurisdiction where the construction activities are completed, at least 30 days prior to construction.	Prior to Construction	BLM	Prepare and implement waste management plan as defined in MM HAZ-1c.			
MM HAZ-2a	**Test for pesticides/herbicides on currently or historically farmed land.** In areas where the land has been or is currently being farmed, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any contamination. The sampling and testing shall be prepared in consultation with the County Agricultural Commission, conducted by an appropriate California licensed professional, and sent to a California Certified Laboratory. A report documenting the areas proposed for sampling and the process used for sampling and testing shall be submitted to BLM for verification at least 60 days prior to construction. Results of the laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to BLM at least 30 days prior to construction. If soil or groundwater contamination is confirmed as a result of soil sampling, Tule Wind, LLC shall immediately stop work and notify the designated environmental field representative. All work in the contaminated area shall cease, the work shall be cordoned off, and the environmental field representative shall implement appropriate health and safety procedures. Work outside the contaminated area may continue as determined by the environmental field representative. Excavated materials containing elevated levels of pesticides or herbicides would require special handling and disposal according to procedures established by the regulatory agencies. Effective dust control suppression procedures shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Tule Wind, LLC shall contact the appropriate regulatory agencies for the State of California (e.g., DTSC or RWQCB) and the County to plan options for handling, treating, and/or disposing materials.	Prior to Construction	BLM	Test for pesticides/herbicides on farm land, as defined in MM HAZ-2a.			
MM HAZ-2b	**Contingency plan for encountering contaminated soils.** If soil or groundwater contamination is suspected or encountered during grading or excavation activities (e.g., unusual soil discoloration or strong odor), Tule Wind, LLC shall immediately stop work and notify the designated environmental field representative. All work in	Prior to Construction	BLM	Prepare and implement contingency plan as defined in MM HAZ-2b.			

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	the area of suspected contamination shall cease, the work area shall be cordoned off, and the environmental field representative shall implement appropriate health and safety procedures. Work outside the suspected area may continue as determined by the environmental field representative. Preliminary samples of the soil, groundwater, or suspected material shall be taken by OSHA- trained individuals and sent to a California Certified Laboratory for characterization. If the sample testing determines that contamination is not present, work shall continue at the previously suspected site. If contamination is found above regulatory limits, however, the appropriate regulatory agency (e.g., RWQCB or Certified Unified Program Agency (CUPA)) responsible for responding to and providing environmental oversight of the region shall be notified in accordance with state or local regulations. In addition, Tule Wind, LLC shall contact the appropriate regulatory agencies for the State of California (e.g., DTSC or RWQCB) and the County to plan options for handling, treating, and/or disposing of materials. Documentation of the suspected contamination shall be made in the form of a report, identifying the location and potential contamination, as well as the process for sampling. Results of laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians, depending on the jurisdiction where the construction activities are completed, for review and approval.						
MM HAZ-4a	**Safety Assessment.** Prior to commencing construction activities, Tule Wind, LLC shall conduct a safety assessment to describe potential safety issues associated with the project, how safety prevention measures would be implemented, where medical aid kits would be located, the appropriate response action for each safety hazard, and procedures for notifying the appropriate authorities. The assessment shall address issues such as site access, construction hazards, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.	Prior to Construction	BLM	Conduct a safety assessment and implement safety prevention measures based on potential safety issues.			
MM HAZ-4b	**Blasting Plan.** If blasting is deemed necessary for the construction of project components, Tule Wind, LLC shall conduct a pre-blast survey and prepare a blasting plan. A written report of the pre-blast survey and final blasting plan shall be provided to the appropriate regulatory agency and approved prior to any rock removal using explosives. In addition to any other requirements established by the appropriate regulatory agencies, the pre-blast survey and blasting plan shall meet the following conditions, as well as those outlined in Mitigation Measure NOI-1: The pre-blast survey shall be conducted for structures within a minimum radius of 1,000 feet from the identified blast site to be specified by Tule Wind, LLC. Sensitive receptors that could reasonably be affected by blasting shall be surveyed as part of the pre-blast survey. Notification that blasting would occur shall be provided to all owners of the identified structures to be surveyed prior to commencement of blasting. The pre-blast survey shall be included in the final blasting plan. The final blasting plan shall address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement, including provisions to monitor and assess compliance with the air-blast, ground vibration, and peak particle velocity requirements. The blasting plan shall meet criteria established in Chapter 3 (Control of Adverse Effects) in the Blasting Guidance Manual of the U.S. Department of Interior Office of Surface Mining Reclamation and Enforcement. The blasting plan shall outline the anticipated blasting procedures for the removal	Prior to Construction	BLM	Conduct a pre-blast survey as defined in MM HAZ-4b.			

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	of rock material at the proposed turbine foundation locations. The blasting procedures shall incorporate line control to full depth and controlled blasting techniques to create minimum breakage outside the line control and maximum rock fragmentation within the target area. Prior to blasting, all applicable regulatory measures shall be met. Tule Wind, LLC, its general contractor, or its subcontractor (as appropriate) shall keep a record of each blast for at least 1 year from the date of the last blast.						
MM HAZ-5a	**Spill Prevention Control and Countermeasure Plan.** Prior to the facility going online and becoming operational, Tule Wind, LLC shall prepare an SPCC plan to address proper procedures for storage, handling, spill response, and disposal of hazardous materials for the ongoing operation of the project. The SPCC plan shall meet all requirements outlined in Title 40 of the Code of Federal Regulations, Part 112 (40 CFR Part 112). The SPCC plan shall be reviewed and approved by the appropriate agency's engineering department and certified by a Registered Professional Engineer. The SPCC plan shall identify operating procedures that the facility will implement to prevent oil spills; control measures installed to prevent oil from leaving the project site; and countermeasures to contain, clean up, and mitigate the effects of an oil spill. A copy of the plan shall be kept on site at the facility and made available for review by the U.S. EPA Regional Administrator during normal business hours. The plan shall be amended as required under 40 CFR Part 112. The plan shall be reviewed, evaluated, and updated (if necessary) every 5 years.	Prior to Construction	BLM	Prepare and implement a SPCC as defined in MM HAZ-5a.			
MM HAZ-5b	**Hazardous Materials Business Plan.** Prior to the facility going online and becoming operational, Tule Wind, LLC shall prepare an HMBP in accordance with all related requirements in California Health and Safety Code, Chapter 6.95, Articles 1 and 2. The HMBP shall contain basic information on the location, type, and quantity of hazardous materials stored or used by the facility, as well as the health risks associated with each hazardous material. The HMBP shall include three components: an inventory and site map, emergency response plan, and employee training. The plan shall be reviewed and recertified every year and amended as required by California Health and Safety Code, Chapter 6.95, Articles 1 and 2.	Prior to Construction	BLM	Prepare and implement a hazardous materials business plan as defined in MM HAZ-5b.			
MM HAZ-6	**Wind Turbine Safety Zone and Setbacks.** Prior to approval of final construction plans and as part of the Health and Safety Program for the project described in Mitigation Measure HAZ-1b, Tule Wind, LLC shall establish a safety zone or setback for wind turbine generators from residents and occupied buildings, roads, ROWs, transmission lines, and other public access areas sufficient to prevent accidents from the operation of wind turbine generators. A plan detailing the proposed setbacks and safety zone shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians, depending on the jurisdiction where the construction activities are completed, for review and approval at least 30 days prior to construction of any turbine foundation. The plan shall include a graphic depicting each turbine and the associated buffer safety zone. The industry standard safety setback is 1.25 times the total height for wind turbines and 1.0 times the total height for towers that do not contain moving parts. The safety setback shall be measured from the center of the wind turbine or tower to the edge of the ROW or easement, or if no ROW or easement is established, to the line or structure in question. The applicant shall ensure that all towers and structures comply with appropriate safety zones and setbacks. Tule Wind, LLC or its contractor shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to approved setbacks and safety zones.	Prior to and During Construction	BLM	Provide final construction plans that identify a safety zone or setback for wind turbine generators from residents and occupied buildings, roads, ROWs, transmission lines, and other public access areas			

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APM TULE-PHS-1	A safety assessment shall be conducted to describe potential safety issues and the means that would be taken to mitigate them, including issues such as site access, construction, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.	Prior to and During Construction	BLM	Prepare a safety assessment to identify potential safety issues and means to mitigate potential safety issues.			
APM TULE-PHS-2	A health and safety program shall be developed to protect both workers and the general public during construction, operation, and decommissioning of the project. Regarding occupational health and safety, the program shall identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; Occupational Safety and Health Administration (OSHA) standard practices for safe use of explosives and blasting agents; and measures for reducing occupational electric and magnetic fields (EMF) exposures; establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards)). The program shall include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies shall be established.	Prior to, During Construction, Operation and Decommissioning.	BLM	Prepare a health and safety program to protect both workers and general public during construction, operation and decommissioning.			
APM TULE-PHS-3	The health and safety program shall establish a safety zone or setback for wind turbine generators from residences and occupied buildings, roads, rights-of-ways, and other public access areas that is sufficient to prevent accidents resulting from the operation of wind turbine generators. It shall identify requirements for temporary fencing around staging areas, storage yards, and excavations during construction or decommissioning activities. It shall also identify measures to be taken during the operation phase to limit public access to hazardous facilities (e.g., permanent fencing installed only around electrical substations, and turbine tower access doors locked).	Prior to Construction	BLM	Project design shall identify a safety zone or setback for wind turbine generators from residences and occupied buildings, roads, rights-of-ways, and other public access areas that is sufficient to prevent accidents resulting from the operation of wind turbine generators			
APM TULE-PHS-4	The project shall be planned to minimize electromagnetic interference (EMI) (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with Federal Communications Commission (FCC) regulations. Signal strength studies shall be conducted when proposed locations have the potential to impact transmissions. Potential interference with public safety communication systems (e.g., radio traffic related to emergency activities) shall be avoided.	Prior to Construction	BLM	Project design shall minimize electromagnetic interference (EMI) (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with Federal Communications Commission (FCC) regulations			
APM TULE-PHS-5	The project shall be planned to comply with Federal Aviation Administration (FAA) regulations, including lighting regulations, and to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips.	Prior to Construction	BLM	Project design shall be planned to comply with Federal Aviation Administration (FAA) regulations.			
APM TULE-PHS-6	Temporary fencing may be installed around staging areas and storage yards during construction to limit public access. Excavation areas will be provided with barriers surrounding them.	During Construction	BLM	Placement of temporary fencing around staging areas and storage yards during construction.			
APM TULE-PHS-7	Permanent fencing shall be installed and maintained around electrical substations, and turbine tower access doors shall be locked to limit public access.	Operation	BLM and County of San Diego	Fencing placed around electrical substations and ensuring turbine tower access doors are locked.			
APM TULE-PHS-8	In the event the project results in electromagnetic interference (EMI), the operator shall work with the owner of the impacted communications system to resolve the problem. Additional warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes from wind turbines can be quickly recognized.	Operation	BLM	In the event the project results in electromagnetic interference (EMI), the operator shall work with the owner of the impacted communications system to resolve the problem.			
MM PS-1a	**Minimize electromagnetic and public safety communications.** The project shall be designed to minimize EMI (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with FCC regulations. Signal strength studies	Prior to Construction	BLM	Complete signal strength studies when proposed locations have the potential to impact transmissions.			

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	shall be completed prior to construction and conducted when proposed locations have the potential to impact transmissions. Potential interference with public safety communications systems (e.g., radio traffic related to emergency activities) shall be avoided. In the event the project results in EMI, Tule Wind, LLC or the facility operator shall work with the owner of the impacted communications system to resolve the problem. Potential measures may include realigning the existing antenna or installing relays to transmit the signal around the project. Additional warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes from project equipment can be quickly recognized.						
MM PS-1b	**Limit conductor surface potential.** Prior to construction, Tule Wind, LLC shall specify and implement designs that limit the conductor surface electric gradient in accordance with the Institute of Electrical and Electronic Engineers (IEEE) Radio Noise Design Guide.	Prior to Construction	BLM	Final construction plans shall limit the conductor surface electric gradient.			
MM PS-1c	**Document complaints of broadcast interference.** After energizing the transmission line, Tule Wind, LLC shall respond to and document all radio/television/equipment interference complaints received and the responsive actions taken. These records shall be made available to the appropriate regulatory agency for review upon request. Tule Wind, LLC shall refer all unresolved disputes to the approving agency.	Operation	BLM	Document and respond to all broadcast interference complaints.			
MM PS-1d	**Aeronautical study.** During preliminary design of the wind turbines, Tule Wind, LLC shall prepare an aeronautical study in consultation with the FAA and DOD in order to evaluate potential impacts to air defense and Department of Homeland Security radars. As part of the study, Tule Wind, LLC shall submit to the FAA specific coordinates, heights, frequencies, and power measurements related to each proposed turbine in order for the FAA to evaluate whether any of the turbines would exceed obstruction standards for flight operations or result in a significant hazard to air navigation in the area during construction or operation. Tule Wind, LLC shall coordinate with the FAA and DOD to resolve any issues related to the project's potential to impact the aforementioned radar systems, which may involve the incorporation of appropriate design considerations, including but not limited to, markings and lighting in accordance with FAA regulations. Tule Wind, LLC shall incorporate into the final design plans all conditions coordinated with the FAA and DOD for a determination of no hazard to air navigation.	Prior to Construction	BLM, FAA and DOD	Prepare and implement aeronautical study as defined in PS-1d.			
MM PS-2	**Determine proper grounding procedures and implement appropriate grounding measures.** As part of the project siting and construction process, Tule Wind, LLC shall identify objects (such as fences, conductors, and pipelines) that have the potential for induced voltages and work with the affected parties to determine proper grounding procedures (Note: CPUC General Order 95 and the NESC do not have specific requirements for grounding). Tule Wind, LLC shall install all necessary grounding measures prior to energizing the line. At least 30 days prior to energizing the line, Tule Wind, LLC shall notify in writing all property owners within and adjacent to the project's ROW regarding the date the line is to be energized, subject to the review and approval of the appropriate regulatory agency. The written notice shall provide a contact person and telephone number for answering questions regarding the line and guidelines on what activities should be limited or restricted within the ROW. The written notice shall describe the nature and operation of the line, and the applicant's responsibilities with respect to grounding all conducting objects. In addition, the notice shall describe the property owner's responsibilities with respect to notification for any new objects that may require grounding and guidelines for maintaining the safety of the ROW.	Prior to Construction	BLM	• Implement grounding measures as defined in PS-2. • Provide notification to landowners prior to energizing transmission lines.			

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	Tule Wind, LLC shall respond to and document all complaints received and the responsive action taken. These records shall be made available to the appropriate regulatory agency for review upon request. Tule Wind, LLC shall refer all unresolved disputes to the approving agency for resolution.						
Air Quality							
APM TULE-AIR-1	The construction contractor(s) shall adhere to all San Diego County Air Pollution Control District (APCD) Rules and Regulations.	During Construction	BLM	Comply with SDAPCD rules and regulations to minimize dust during construction.			
APM TULE-AIR-2	Compliance with SDAPCD Rule 55 for fugitive dust and SDAPCD Rule 61 for handling VOCs shall reduce NOx, and PM10 and PM 2.5 emissions during construction.	During Construction	BLM	Comply with SDAPCD rules and regulations to minimize dust during construction and for handling of VOCs and NO_x			
APM TULE-AIR-3	Implementation of active dust suppression measures during the construction period to minimize the creation of dust clouds; including, but not limited to: applying water at least once per day, or conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction. Increase watering frequency to four times per day if winds exceed 25 mph. Non-toxic soil stabilizers may be utilized to control fugitive dust.	During Construction	BLM	• Apply water once per day or conduct watering as necessary to prevent visible dust emissions. • Increase water frequency to four times per day if winds exceed 25 mph.			
APM TULE-AIR-4	Restrict construction vehicle speeds to 20 miles per hour (MPH) on unpaved roads.	During Construction	BLM	Restrict construction vehicle speeds to 20 miles per hour (MPH) on unpaved roads.			
APM TULE-AIR-5	Construction workers will be encouraged to carpool to the job site.	During Construction	BLM	Encourage construction workers to carpool to the project site.			
APM TULE-AIR-6	Construction vehicles and equipment will be limited to a maximum of five minutes idling time, when not performing required tasks. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time.	During Construction	BLM	Limit idling time to five minutes or less.			
APM TULE-AIR-7	Heavy-duty diesel equipment engines shall be properly tuned and maintained in compliance with State of California emissions regulations to ensure minimum emissions under normal operation. Construction contractors shall implement this measure to the extent practical.	During Construction	BLM	Properly maintain heavy-duty diesel equipment.			
APM TULE-AIR-8	Use low-emission construction equipment. The construction contractor(s) shall maintain construction equipment per manufacturing specifications and use low-emission equipment. The construction contractor(s) shall substitute small electric-powered equipment for diesel and gasoline-powered construction equipment where feasible.	During Construction	BLM	Use low-emission construction equipment.			
APM TULE-AIR-9	Apply soil stabilizers to construction areas not being utilized.	During Construction	BLM	Apply soil stabilizers to construction areas not being utilized.			
APM TULE-AIR-10	Prepare and implement a high wind dust control plan.	Prior to Construction	BLM	Prepare and implement a high wind dust control plan.			
APM TULE-AIR-11	Stabilize previously disturbed areas if subsequent construction is delayed.	During Construction	BLM	Stabilize previously disturbed areas if subsequent construction is delayed.			
APM TULE-AIR-12	Replace ground cover in disturbed areas as soon as feasible.	During Construction	BLM	Replace ground cover in disturbed areas as soon as feasible.			
APM TULE-AIR-13	Require 90-day low-NOx tune-ups for construction equipment.	During Construction	BLM	90-day low-NOx tune-ups for construction equipment.			
APM TULE-AIR-14	Utilize diesel particulate filter on heavy equipment where feasible.	During Construction	BLM	Utilize diesel particulate filter on heavy equipment where feasible.			
APM TULE-AIR-15	Vehicles hauling dirt or fill shall be covered with a tarp or by other means.	During Construction	BLM	Vehicles hauling dirt or fill shall be covered with a tarp or by other means.			

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MM AQ-1	**Prepare and implement a Dust Control Plan.** Tule Wind, LLC shall prepare and file with the San Diego Air Pollution Control District and Bureau of Land Management a Dust Control Plan that describes how the following measures would be implemented and monitored at all locations of the project. The following measures shall be incorporated to reduce fugitive dust and other criteria pollutant emissions during construction activities: • Rock aprons or rattle plates will be installed as needed at the intersection of dirt access roads and paved public roadways to clean the tires of equipment prior to leaving the site. • All active construction areas, unpaved access roads, parking areas, and staging areas will be paved, watered three times daily, or stabilized with nontoxic soil stabilizers as needed to control fugitive dust. • Pre-water sites up to 48 hours in advance of clearing to control fugitive dust • All public streets will be swept or cleaned with mechanical sweepers if visible soil material is carried onto them by construction activities or vehicles. • Apply chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands that are unused for 14 consecutive days) Exposed stockpiles (e.g., dirt, sand, etc.) will be covered and/or watered or stabilized with nontoxic soil binders as needed to control emissions. • Pre-moisten, prior to transport, import and export dirt, sand, or loose materials • Trucks transporting bulk materials will be completely covered unless 2 feet of freeboard space from the top of the container is maintained with no spillage and loss of material. In addition, the cargo compartment of all haul trucks will be cleaned and/or washed at the delivery site after removal of the bulk material. • Movement of bulk material handling or transfer will be stabilized prior to handling or at a point of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line. • Plant vegetative ground cover in disturbed areas to meet the criteria of the revegetation plan. • Traffic speeds on unpaved roads and the ROW will be limited to 15 miles per hour. • Vehicle idling time will be limited to a maximum of 5 minutes for vehicles and construction equipment, except where idling is required for the equipment to perform its task. • Road graders used during site development activities will be equipped with a CARB-verified Level 2 diesel emission control strategy or a comparable diesel-control technology that will reduce inhalable particulate matter (PM10) emissions by 50% or more. • If suitable park-and-ride facilities are available in the project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the project's construction schedule. • All off-road, diesel-powered construction equipment will be kept in good tune and maintained according to the manufacturer's specifications. • Construction equipment will use electric-powered motors where feasible.	Prior to Construction	BLM	Prepare and implement a dust control plan as defined in MM AQ-1.			

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	• The construction contractor will prepare and implement a high-wind dust control plan and terminate soil disturbance when winds exceed 25 miles per hour. • The construction contractor will require 90-day, low-NOx tune-ups for off-road equipment. • Diesel particulate filters will be utilized on heavy equipment where feasible. • Construction activities will comply with all applicable SDAPCD rules and regulations.						
Water Resources							
APM TULE-HYD-1	The project applicant will consult the Department of California Fish and Game guidelines and recommendations for culvert design so that culverts are appropriately sized and protected to prevent scour and sedimentation and ultimately minimize the long-term impacts to the natural streambed. The project design will meet a 10-year rain event to minimize the trapping of sediment	Prior to Construction	BLM	Ensure project design incorporates recommendations provided by CDFG to prevent scour and sedimentation.			
APM TULE-HYD-2	The project will follow the site design requirements outlined in the County of San Diego Storm Water Management Plan to limit the impacts to the project.	Prior to Construction	BLM	Ensure project design will follow the site design requirements outlined in the County of San Diego Storm Water Management Plan to limit the impacts to the project.			
APM TULE-HYD-3	Maintain pre-development rainfall runoff characteristics: • Locate the project and road improvement alignments to avoid or minimize impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions. • Minimize the project impervious footprint. • Conserve natural areas. • Where landscape is proposed drain rooftops, impervious sidewalks, walkways, trails and patios into adjacent landscaping. • Design and locate roadway structures and bridges to reduce the amount of work in live streams and minimize the construction impacts. • Implement the following methods to minimize erosion from slopes: o Disturb existing slopes only when necessary; o Minimize cut and fill areas to reduce slope lengths; o Incorporate retaining walls to reduce steepness of slopes or to shorten slopes; o Provide benches or terraces on high cut and fill slopes to reduce concentration of flows; o Round and shape slopes to reduce concentrated flow; o Collect concentrated flows in stabilized drains and channels.	Prior to Construction	BLM	Ensure project maintains pre-development rainfall runoff characteristics.			
APM TULE-HYD-4	Protect slopes and channels: • Minimize disturbances to natural drainages. • Convey runoff safely from the tops of slopes • Vegetate slopes with native or drought tolerant vegetation. • Stabilize permanent channel crossings. • Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters. • Other design principles which are comparable and equally effective.	Prior to Construction	BLM	Ensure project design includes measures as defined in APM TULE-HYD-4 to protect slopes and channels.			

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	• Conserve natural areas, soils, and vegetation • Preserve well-draining soils (Type A or B) • Preserve Significant Trees • Minimize disturbance to natural drainages • Set-back development envelope from drainages • Restrict heavy construction equipment access to planned green/open space areas • Minimize and disconnect impervious surfaces • Minimize soil compaction • Re-till soils compacted by construction vehicles/equipment • Collect and reuse upper soil layers of development site containing organic materials • Drain runoff from impervious surfaces to pervious areas • Curb-cuts to landscaping • Rural swales • Concave median • Cul-de-sac landscaping design • LID parking lot design • Permeable pavements • LID driveway, sidewalk, bike-path design • Permeable pavements • Pitch pavements toward landscaping • LID Building Design • Cisterns and rain barrels • Downspout to swale • Vegetated roofs • LID landscaping design • Soil amendments • Reuse of native soils • Smart irrigation systems • Street trees.						
APM TULE-HYD-5	The project will design outdoors material storage areas to reduce pollution introduction by ensuring: • Hazardous materials with the potential to contaminate urban runoff shall either be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the stormwater conveyance system; or (2) protected by secondary containment structures such as berms, dikes, etc. • The storage area shall be paved and sufficiently impervious to contain leaks and spills • The storage area shall have a roof or awning to minimize direct precipitation within the secondary containment area. The project will design trash storage areas to reduce pollution introduction by: • Paved with an impervious surface, designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash. • Provide attached lids on all trash containers that exclude rain, or roof or awning to minimize direct precipitation.	Prior to Construction	BLM	Project design will incorporate measures as defined in APM TULE-HYD-5 to reduce potential for pollution introduction at material storage areas.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
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	The project will provide storm drain system stenciling and signage (if applicable): • All storm drain inlets and catch basins within the Project area shall have a stencil or tile placed with prohibitive language (such as: "NO DUMPING – I LIVE IN <<name receiving water>>") and/or graphical icons to discourage illegal dumping. • Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area. • The project will use efficient irrigation systems and landscape design. • Employ rain shutoff devices to prevent irrigation after precipitation. • Design irrigation systems to each landscape area's specific water requirements. • Use flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. • Employ other comparable, equally effective, methods to reduce irrigation water runoff. The project will comply with the County of San Diego SUSMP, Iberdrola Renewables will maintain the detention basins and swales/Brow/Ditches as a treatment control BMP during the operations and maintenance of the project.						
MM HYD-1	**A Stormwater Pollution Prevention Plan shall be prepared to reduce soil erosion during construction.** In compliance with the new SWRCB's NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, effective July 1, 2010), Tule Wind, LLC shall prepare a project-specific SWPPP. The SWPPP shall be prepared before construction begins and kept on site throughout the construction process. The SWPPP shall include: • Identification of pollutant sources and non-stormwater discharges associated with construction activity. • Specifications for BMPs that shall be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, pull sites, and helicopter landing zones. Specifications shall include: o A plan for training construction crews o A plan for monitoring and inspecting BMPs and site conditions o A plan for sampling and analysis of pollutants (as necessary). Where applicable, the following shall apply: • Construction impacts shall be minimized to the greatest extent possible • Upon completion of construction phases, roadways shall be reduced to minimum widths needed • Areas disturbed during construction shall be revegetated to their natural states • Construction roadways shall follow natural contours to the extent practical and be designed to minimize stream crossings, avoid wetlands, and maintain surface water runoff patterns to prevent erosion • CDFG guidelines for culverts shall be followed to minimize long term maintenance and meet a 10-year rain event to minimize trapping of sediment. • Where applicable, the following shall apply to reduce the release of contaminants to the local surface and groundwater: o For on-site storm drain inlets, mark all inlets with the words "No Dumping! Flows to Sensitive Habitat" or similar. o For landscaping, show locations of native trees or areas of shrubs and	Prior to Construction	BLM, RWQCB	Prepare and implement SWPPP as defined in MM HYD-1.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
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	ground cover to be undisturbed and retained. Show self-retaining landscape, if any. State that final landscape plans will preserve existing native trees, shrubs, and ground cover will cover maximum extent possible. o Design landscaping to minimize irrigation, runoff, and use of pesticides and fertilizers that contribute to stormwater pollution. Select plants that are appropriate for site soils, slopes, climate, wind, sun, rain, land use, ecological consistency, and plant interactions. o For outdoor storage of equipment or materials, show storage areas and how they will be covered and what structural features or grading will be incorporated to prevent pollutants from discharging from the site. o Designate areas for vehicle/equipment repair, maintenance, and cleaning, and document how these areas will be contained to prevent pollutant runoff. o For leaking or failure of large power transformers, have 100% containment at each power transformer.						
MM HYD-2	**Avoidance and preventative measures to protect local groundwater during excavation.** Prior to excavation, a qualified geologist/hydrologist shall determine the depth of groundwater in areas where excavation would occur. The project shall be designed to avoid areas of shallow groundwater where feasible. In such areas where groundwater cannot be avoided during excavation, the site shall be dewatered during construction, and materials that could contaminate the groundwater shall be kept at least 200 feet from the dewatering activities. An NPDES permit shall be obtained for proper disposal of water. Treatment may be required prior to discharge.	Prior to Construction	BLM	• Determine depth of groundwater in areas where excavation would occur. • Obtain NPDES permit for proper disposal of groundwater.			
MM HYD-3	**Identification of sufficient water supply.** Prior to construction Tule Wind, LLC will prepare comprehensive documentation that identifies one or more confirmed, reliable water sources that when combined meet the project's full water supply construction needs. Documentation will consist of the following: • Preparation of a groundwater study. For well water that is to be used, the applicant will commission a groundwater study by a qualified hydrogeologist to assess the existing condition of the underlying groundwater/aquifer and all existing wells (with owner's permission) in the vicinity of proposed well location/water sources. The groundwater study will evaluate aquifer properties and aquifer storage. The groundwater study will estimate short and long-term well water supplies from each well proposed to be used, and documentation indicating that each well is capable of producing the total amount of water to be supplied for construction from each well. The groundwater study will estimate short- and long-term impacts of the use of the well(s) on the local groundwater production (short-term extraction for construction water and ongoing O&M water), on all project wells, and on other wells in the project area. The groundwater study will include an assessment of the potential for subsidence brought on by project-related water use in the area. The applicant will provide demonstration of compliance will all applicable laws and regulations and will obtain a County of San Diego Major Use Permit for use of any proposed well prior to construction that is located within the County. • Documentation of Purchased Water Source(s). For water that is to be purchased from one or more water/utility district(s), the applicant shall provide written documentation from such district(s) indicating the total amount of water to be provided and the time frame that the water will be made available to the project. (Confirmed potential water district sources include the Jacumba	Prior to Construction	BLM	• Confirm reliable water source to meet project's construction requirements. • Prepare and implement groundwater study as defined in MM-HYD-3.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
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	Community Services District and the Live Oak Springs Water Company). Total confirmed water supplies from the combination of above documented sources shall equal the total gallons of water needed through construction of the project.						
MM HYD-4	**Stormwater Management Plan.** The applicant shall commission an SWMP in compliance with the County of San Diego Major Storm Water Management Plan. The SWMP shall be project specific and developed in conjunction with project design. The SWMP shall include site design BMPs that, where applicable, shall: • Maintain pre-development rainfall runoff characteristics. The BMPs shall: o Locate the project and road improvement alignments to avoid or minimize impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions. o Minimize the project's impervious footprint. o Conserve natural and critical areas, such as floodplains, steep slopes, wetlands, and areas with erosive and unstable soil conditions o Where landscape is proposed, drain rooftops, impervious sidewalks, walkways, trails, and patios into adjacent landscaping. o Design and locate roadway structures and bridges to reduce the amount of work in live streams, and minimize the construction impacts. o Implement the following methods to minimize erosion from slopes: ▪ Disturb existing slopes only when necessary ▪ Minimize cut-and-fill areas to reduce slope lengths ▪ Incorporate retaining walls to reduce steepness of slopes or to shorten slopes ▪ Provide benches or terraces on high cut-and-fill slopes to reduce concentration of flows; ▪ Round and shape slopes to reduce concentrated flow o Collect concentrated flows in stabilized drains and channels. • Protect slopes and channels. The BMPs shall: o Minimize disturbances to natural drainages. o Convey runoff safely from the tops of slopes. o Vegetate slopes with native or drought tolerant vegetation. o Stabilize permanent channel crossings. o Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters. o Include other design principles that are comparable and equally effective. o The SWMP shall also incorporate Low Impact Development Features into the project, including but not limited to: ▪ Preserve well-draining soils (Type A or B) ▪ Preserve significant trees ▪ Set back development envelope from drainages ▪ Restrict heavy construction equipment access to planned green/open space areas ▪ Re-till soils compacted by construction vehicles/equipment ▪ Collect and reuse upper soil layers of development site containing organic materials	Prior to Construction	BLM and County of San Diego	Prepare and implement Stormwater Management Plan.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
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	▪ Curb cuts to landscaping ▪ Use rural swales ▪ Use concave median ▪ Use permeable pavements ▪ Pitch pavements toward landscaping ▪ Downspout to swale ▪ Use vegetated roofs ▪ Use soil amendments ▪ Reuse native soils ▪ Use smart irrigation systems ▪ Use street trees (HDR 2009b) The SWMP shall ensure that the project follows CDFG guidelines for culverts to minimize long-term maintenance and meet a 10-year rain event to minimize the trapping of sediment. The San Diego County Department of Public Works shall ensure that the SWMP is implemented as proposed.						
MM HYD-5	**Creek-crossing procedures.** Where creek crossings can be completed during dry season, with no flows present in the creek, seasonally timed restorative open trenching will be completed. This procedure will use minimum trench widths. Trench cut material will not be placed outside of the creek bed and outside of 100-year inundated areas. Trench fill will be compacted and replaced to existing conditions, including matching existing creek bed gradations, and restoring vegetation. Open trenching restoration will be completed prior to any wet season flows, and will include anti-erosion action plans for any unplanned rainfall during construction. The applicant shall obtain all required permits prior to completing open trenching through drainages. In any case, flows will be isolated from open trenching by best management practices mandated by the General Construction Permit. Areas of trenching would be restored and/or vegetated at completion of work. Where creek crossing cannot be completed during the dry season creek crossing shall use jack-and-bore procedures to avoid direct impacts and shall be conducted in a manner that does not result in sediment-laden discharge or hazardous materials release to the water body. The following measures shall be implemented during horizontal boring (jack-and-bore) operations: (1) Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages. (2) Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention). (3) Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, and drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times. (4) Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion, and temporary sediment barriers shall be left in place until restoration is deemed successful. The applicant shall obtain the required permits prior to conducting creek crossing work. Required permits may include ACOE CWA Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration	Construction	BLM	Implement creek-crossing procedures as defined in MM HYD-5 in the event creek crossings cannot be completed during the dry season.			

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	Agreement 1602. The applicant shall implement all pre- and post-construction conditions identified in the permits issued. The plan shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians depending on the jurisdiction where the construction activities are being completed, 60 days prior to construction.						
MM HYD-7	**Bury power line below 100-year scour depth.** At locations where the buried power line is to be at or adjacent to a streambed capable of scour, the power line shall be located below the expected depth of scour from a 100-year flood, or otherwise protected from exposure by scour which, for purposes of this mitigation measure, also includes lateral (stream bank) erosion and potential scour associated with flows overtopping or bypassing a culvert or bridge crossing. During final design, a registered civil engineer with expertise in hydrology, hydraulics, and river mechanics shall make a determination of where the underground line could be at risk of exposure through scour or erosion from a 100-year event.	Prior to Construction	BLM	Final construction plans identify areas that could be at risk of exposure through scour or erosion from a 100-year flood event.			
Geology, Mineral Resources, and Soils							
MM GEO-1	**Erosion Control and Sediment Transport Control Plan.** The Erosion Control and Sediment Transport Control Plan would be included with the project grading plans submitted to the County for review and comment. The plan would be submitted to BLM, San Diego County, CSLC, BIA, and/ or the Ewiiaapaayp Band of Kumeyaay Indians, depending on the jurisdiction where the construction activities are being completed, a minimum of 60 days prior to project design and would be prepared in accordance with the standards provided in the Manual of Erosion and Sedimentation Control Measures and consistent with practices recommended by the Resource Conservation District of Greater San Diego County. Implementation of the plan would help stabilize soil in graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be implemented during construction activities. Erosion control efforts, such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (e.g., flagging), vehicle mats in wet areas, and retention/settlement ponds, would be installed before extensive soil clearing and grading begins. Appropriate stabilization measures, such as mulching or seeding, would be used to protect exposed areas during construction activities. Revegetation plans, the design and location of retention ponds, and grading plans would be submitted to the CDFG and ACOE for review in the event of construction near waterways. In disturbed areas where construction equipment has caused compaction of soils (e.g., staging areas, structure sites, temporary spur roads, etc.), soils would be decompacted as necessary prior to seeding, and reclamation would occur to enhance revegetation and reduce potential for erosion.	Prior to Construction	BLM	Prepare and implement Erosion Control and Sediment Transport Control Plan as defined in MM GEO-1.			
MM GEO-2	**Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.** The design-level geotechnical studies to be performed by Tule Wind, LLC shall identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures shall be utilized for protection of reinforcement, concrete, and metal-structural components against corrosion, including use of corrosion-resistant materials and coatings, increased thickness of project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment	Prior to Construction	BLM	Incorporate appropriate design measures into final construction plans as defined in MM GEO-2.			

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	processes, and redirection of surface water and drainage away from expansive foundation soils. Studies shall conform to industry standards of care and ASTM standards for field and laboratory testing. Design shall conform to applicable sections of the County of San Diego grading codes, CBC, and the standard specifications for public works construction. The geotechnical studies prepared by a certified geologist shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians, depending on the jurisdiction where the construction activities are being completed, 60 days prior to construction of proposed structures.						
MM GEO-3	**Conduct geotechnical investigations.** The applicant shall perform design-level geotechnical investigations to evaluate the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures that meet CBC and IEEE design parameters shall be incorporated into the project designs. Appropriate measures for project facilities could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures. The geotechnical investigations prepared by a certified geologist shall be submitted to BLM, San Diego County, CSLC, BIA, and/or the Ewiiaapaayp Band of Kumeyaay Indians depending on the jurisdiction where the construction activities are being completed, 60 days prior to construction of proposed structures.	Prior to Construction	BLM	Prepare geotechnical investigation and incorporate appropriate engineering design and construction measures into final construction plans.			
MM GEO-4	**Facilities inspections conducted following major seismic event.** If large levels of ground shaking (such as Modified Mercalli Intensity VI or greater) are experienced or a major earthquake (magnitude 6.0 and above), occurs along the Elsinore Fault, a professional licensed geologist, geotechnical engineer, and structural engineer hired by Tule Wind, LLC shall perform facilities inspections as quickly as possible. Careful examination shall be conducted of all project facilities. Any required repair or needed improvements shall be implemented as soon as feasible to ensure that the integrity of project facilities has not been compromised.	Post-Construction	BLM	Perform inspections to determine if any required repairs are needed post-seismic events.			
MM GEO-5	**Conduct geotechnical surveys for landslides and mines.** Tule Wind, LLC shall perform design-level geotechnical surveys to evaluate the potential for unstable slopes, landslides, earthflows, debris flows and mine tunnels/shafts in the vicinity of project facilities and shall address these surveys in final design of project facilities. Based on these surveys, approved project facility design shall incorporate appropriate measures, such as locating facilities away from very steep hillsides, debris flow source areas, the mouths of steep hillside drainages, and mine tunnels and shafts. Appropriate design and construction considerations shall be followed for the slope areas within the project area, including BMPs for surface drainage, reducing slope inclinations where grading operations are conducted to minimize potential slope instabilities. Possible mitigation measures to reduce rockfall, rock slope failure, and landslide hazards include mechanical removal of large boulders from slope faces; stabilization of boulders with anchors, rock bolting, gunite, or cable nets; or construction of intercepting slope ditches or berms. The geotechnical studies prepared by a certified geologist shall be submitted to BLM, San Diego County, CSLC, BIA, and/ or the Ewiiaapaayp Band of Kumeyaay Indians, depending on the jurisdiction where the construction activities are being completed, 60 days prior to construction of proposed structures.	Prior to Construction	BLM	Final construction plans incorporate appropriate measures based on results of geotechnical surveys completed for landslides and mines.			
Public Services and Utilities							

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MM PSU-1a	**Notification of utility service interruption.** Prior to construction in which a utility service interruption is known to be unavoidable, Tule Wind, LLC shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the applicable lead agency.	Prior to Construction	BLM	Provide notification to members of the public in the event a planned outage is required.			
MM PSU-1b	**Protect underground utilities.** Prior to construction of the transmission line, the Tule Wind, LLC shall submit to BLM and San Diego County written documentation, including evidence of review by the appropriate jurisdictions, including the following: • Construction plans designed to protect existing utilities and that show the dimensions and location of the finalized alignment • Records that the applicant provided the plans to affected jurisdiction for review, revision, and final approval • Evidence that the project meets all necessary local requirements • Evidence of compliance with design standards • Copies of necessary permits, agreements, or conditions of approval • Records of discretionary decisions made by the appropriate agencies.	Prior to Construction	BLM	Implement measures as defined in PSU-1b to protect underground utilities.			
MM PSU-1c	**Coordinate with utility providers.** Tule Wind, LLC shall coordinate with all applicable utility providers with facilities located within or adjacent to the project to ensure that design does not conflict with other facilities prior to construction. In the event of a conflict, the project will be aligned vertically and/or horizontally as appropriate to avoid other utilities and provide adequate operational and safety buffering. Alternately, the other existing facilities may be relocated. Long-term operations and maintenance of the project will be negotiated through easement, purchased ROW, franchise agreement, or joint use agreement.	Prior to Construction	BLM	Coordinate with all applicable utility providers to identify potential conflicts with other utilities.			
Fire and Fuels Management							
APM TULE-PDF-1	Iberdrola Renewables will comply with the applicable sections in NFPA 51-B "Fire prevention during welding, cutting and other hot work" and CFC Chapter 26 "Welding and other Hot Work." During Red Flag Alerts, operations involving cutting, welding, thermit welding, brazing, soldering, grinding, thermal spraying, use of torches, or other similar activity during construction or maintenance activities will be conducted according to NFPA 51-B. Red Flag Warnings are issued by the U.S. National Weather Service based on humidity of less than or equal to 25 percent, temperature greater than 75 F degrees and a sustained wind average of 15 miles per hour or greater. The project area is located in the National Weather Service San Diego Mountain (CA 258) zone. Iberdrola Renewables will implement a Hot Work Procedure on-site to minimize the potential for fire ignition. Components of the Hot Work Procedure will include: • Prior to hot work activity commencing, the on-site Iberdrola Renewables fire safety coordinator will monitor daily the National Weather Service Red Flag Alert system. • In the event of a Red Flag Alert, prior to hot work activity commencing, the on-site Iberdrola Renewables fire safety coordinator will contact the local fire agency to determine the level of alert specific to the project area. • The on-site Iberdrola Renewables fire safety coordinator will require all hot work to be conducted according to NFPA 51-B. • Iberdrola Renewables will require all employees and/or sub-contractors who perform hot work during Red Flag Alerts to be trained under the applicable	During Construction	BLM	Comply with the applicable sections in NFPA 51-B "Fire prevention during welding, cutting and other hot work" and CFC Chapter 26 "Welding and other Hot Work."			

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	sections of NFPA 51-B. • The on-site Iberdrola Renewables fire safety coordinator will have the authority to modify hot work activities associated with construction and/or maintenance activities to the degree necessary to prevent fire ignition.						
APM TULE-PDF-2	Develop and implement a Construction and Maintenance Fire Prevention/Protection Plan. Iberdrola Renewables shall develop a multi-agency Construction and Maintenance Fire Prevention Plan. Plan reviewers shall include: CPUC, CAL FIRE, BLM, CSLC, and the County of San Diego. Iberdrola Renewables shall provide a draft copy of this Plan to each listed agency at least 90 days before the start of construction activities. Comments on the plan shall be provided by Iberdrola Renewables to all other participants, and Iberdrola Renewables shall resolve each comment in consultation with and to the satisfaction of CAL FIRE, SDRFPD and the SDCFA. The final plan shall be submitted to CAL FIRE, SDRFPD and SDCFA at least 30 days prior to the initiation of construction activities. Iberdrola Renewables shall fully implement the plan during all construction and maintenance activities. All construction work on the project shall follow the Construction Plan guidelines and commitments, and plan contents are to be incorporated into the standard construction contracting agreements for the construction of the project. Primary plan enforcement and implementation responsibility will remain with Iberdrola Renewables. At a minimum, plan contents will include the requirements of Title 14 of the California Code of Regulations, Article 8 #918 "Fire Protection" and the elements listed below: 1. During the construction phase of the project, Iberdrola Renewables shall implement ongoing fire patrols. Iberdrola Renewables shall maintain fire patrols during construction hours and for 1 hour after end of daily construction, and hotwork. 2. Fire Suppression Resource Inventory – In addition to CCR Title 14, 918.1(a), (b), and (c), Iberdrola Renewables shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on quarterly basis and provide it to the CAL FIRE, SDRFPD, SDCFA, CPUC, BLM, and to state and federal fire agencies. 3. During Red Flag Warning events, as issued daily by the National Weather Service in SRAs and Local Responsibility Areas (LRA), all non-essential, non-emergency construction and maintenance activities shall cease. Utility and contractor personnel will be informed of changes to the Red Flag event status as stipulated by CAL FIRE. 4. All construction crews and inspectors shall be provided with radio and cellular telephone access that is operational along the entire length of the approved route to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. The radio shall allow communications with other Iberdrola Renewables vehicles and construction trailer. All fires will be reported immediately upon detection. 5. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards will be updated and redistributed to all crewmembers as needed and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect.	Prior to Construction	BLM	Develop and implement a Construction and Maintenance Fire Prevention/Protection Plan.			

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	6. Each member of the construction crew shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. 7. Water storage tanks and access roads shall be installed and operational at time of start of construction.						
APM TULE-PDF-3	As part of the project design, a blasting plan will be prepared. The blasting plan will include identification of planned blasting locations, a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and to determination the area affected by the planned blasting. Blasting methods will take into consideration the high wildland fire hazard conditions in and surrounding the project area. Precautions to prevent fire will be included in the blasting plan will include requirements to have all blasting charges capped with soil and/or other materials that are not combustible. Blasting activities are required to be observed by a Blasting Inspector. A Blasting Inspector is a person on the Sheriff's approved list of inspectors authorized to conduct inspections, before and after a blast. To be on the Sheriff's approved list, an inspector shall be certified by or registered with the International Conference of Building Officials, the International Code Counsel/Counsel of American Building Officials, the Building Officials & Code Administrator or the Southern Building Code Congress International.	Prior to Construction	BLM	Prepare a blasting plan as defined in APM TULE-PDF-3.			
APM TULE-PDF-4	The project will comply with the County of San Diego Consolidated Fire Code, Section 96.1.3301.2, Explosives and Fireworks Applicability. The Fire Code requires a permit application to be issued prior to the start of blasting activities. Blasting activities shall be limited to Monday through Saturday between the hours of 7:00 a.m. and 6:00 p.m. or one-half hour before sunset, whichever occurs first, unless issuance of grant approval. Surrounding residents within 600 feet will be notified in writing within 600 feet of any major blast location or 300 feet from any minor blast location.	Prior to Construction.	BLM	Comply with the County of San Diego Consolidated Fire Code, Section 96.1.3301.2, Explosives and Fireworks Applicability.			
APM TULE-PDF-5	As a standard practice, Iberdrola Renewables does not allow construction waste to accumulate. Waste associated with project construction will be contained in metal containers and/or designated cleared construction staging areas (large items). The metal containers and staging areas will be monitored and emptied on a regular basis.	During Construction	BLM	Waste contained in metal containers and/or designated cleared construction staging areas (large items).			
APM TULE-PDF-6	As part of the project construction and operations, chemicals such as oils and cleaners for turbines will be properly storage, used, and handled as regulated under the California Fire Code (CFC). Areas on the project site that store, use or handle these materials will be at least 50 feet from any building or turbine, and will have a fuel modification zone around them of at least 30 feet and will be constructed in compliance with the CFC. Dispensing of any motor vehicle fuels shall comply with the CFC. Spill control will be provided in all areas, and shall contain the contents of the largest container. Electrical systems shall comply with the CFC and with the National Electrical Code; NFPA 70, and with NFPA 497 where applicable. Grounding and bonding will be provided where necessary. Any transfer or dispensing pumps shall have a remote emergency shutdown device 75 feet away. There shall be portable fire extinguishers with a minimum rating of 20 BC, located approximately 50 feet away and mounted on a visible post approximately 4 feet off ground. Safety signage shall be provided for any transfer/dispensing areas and "No Smoking" signs shall be posted.	During Construction and Operation	BLM	Chemicals properly storage, used, and handled as regulated under the California Fire Code (CFC).			
APM TULE-PDF-7	Based upon the *Estimate of Water Availability* memorandum (Geo-Logic Associates September 7, 2010 – Appendix B to the Applicant's Environmental Document), on the conservative peak water use requirements of 250,000 gallons per day (associated with road construction, concrete mixing and dust control	During Construction	BLM	Water use limited as defined in APM TULE-PDF-7.			

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activities), an estimated continuous supply of water (24-hours per day, 7 days per week) will be required from wells pumping at a cumulative continuous rate of 124 gpm. Although there are several wells on the project site, two wells on the project site have been identified as readily available for project use: 1. One well is located on Rough Acres Ranch approximately one to two miles north of I-8 between Ribbonwood Road and McCain Valley Road. Drilled in 2009, data provided on the well log for this well indicates that the estimated well yield is 60 gallons per minute (gpm); however, with the current pump in this well, the Ranch Manager indicates that the well produces at a rate of 50 gpm. A 72-hour constant rate aquifer pumping test was performed at this well at 50 gpm. Based on the current preliminary test data, there was very little response from pumping in the adjacent observation well, about 30 feet from the pumping well, and therefore it is reasonable to assume that sustained pumping at 50 gpm, at a minimum can be achieved from this well. Further, with a higher volume pump it may be possible to pump at greater volumes without significant impacts to other adjacent groundwater users; 2. One well is located on the Ewiiaapaayp Reservation, about 7 miles north of Interstate 8 on La Posta Road. A 72-hour constant rate aquifer pumping test was conducted at this well at 80 gpm. Based on the preliminary test results it is reasonable to assume that sustained pumping at 80 gpm is feasible at this well location. Therefore, based on the preliminary data from two recent pumping tests with a combined total pumping rate of 130 gpm, it is likely that the necessary water supply requirements for the project (124 gpm of continuous pumping, seven days a week) can be met from these two wells. There are four potential additional water supply sources available for the project. The State Correctional Facility is located about one half mile north of Interstate 8 off of McCain Road. This correctional facility maintains two wells with estimated production of 45 and 65 gpm. The Live Oak Springs Resort located south of Interstate 8 on Old Highway 80 about ¾-mile northwest of the intersection with Highway 94 may provide a source of water supply. This resort (and water company) operates a well that pumps about 40,000 gallons per day (25 to 30 gpm) and maintains a 100,000 gallon pond, and two large tanks with an additional 50,000 gallons of storage capacity. They have committed to providing 40,000 for immediate use and up to 80,000 gallons per day with additional storage tanks (pers. comm., September 8, 2010); equivalent to 28 to 55 gpm. The Jacumba Community Service District (CSD) also has indicated that their well produces 200 gpm and they will commit up to 40,000 gallons per day to the project (pers. comm., September 8, 2010); equivalent to about 28 gpm. Finally, the City of El Centro has indicated that they are willing to sell wastewater plant effluent to the project for use during the construction phase. The available on-site groundwater can provide the required project water requirements through continuous pumping at a rate of 124 gpm. Current pumping test results indicate at least 130 gpm can be achieved from the two tested wells, and potential greater volumes with a higher volume pump at the Rough Acres Ranch test well. However, with off-site water from the State Correctional Facility, Live Oak Springs Resort, and Jacumba CSD for purchase, an additional 80,000 to 120,000 gallons of water per day, or approximately 55 to 83 gpm of water could be available to support the project water supply needs; ample water for the nine-month construction period. With these additional off-site sources, the combined on-site and off-site water could be equivalent to an estimated 213 gpm could be						

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	made available in support of the project. If a fire were to occur in the project area, construction activities utilizing ground water would cease and the groundwater available from these sources could be used for firefighting purposes. In addition, based on informal conversations with the staff members of the various fire agencies and other sources would be utilized for firefighting purposes (HDR staff, Pers. Comm.). Iberdrola Renewables will provide four (4) additional water tanks to the SDRFPD to place at strategic locations throughout the site. The tanks will be installed and maintained by BR, with SDRFPD maintaining adequate water levels for fire protection services. The water tanks will provide a supplemental water source that can be utilized for additional fire suppression for the community of Boulevard and BLM lands that have limited access to water. The same wells will provide the source of water during operations. When the project turbines become operational, only a limited quantity of water will be required, estimated at 2,500 gallons per day to supply the operations and maintenance building services and support staff.						
APM TULE-PDF-8	A Fire and Emergency Protection Services Agreement for the project shall be executed between Iberdrola Renewables and the SDRFPD, and other agencies as appropriate. The Agreement shall be executed by all parties prior to commencement of construction of the project. The purpose of the Agreement is to fund the employment and training of personnel, and acquisition and maintenance of equipment to provide fire and emergency protection services for the project. The Agreement will describe the scope of services to be provided by the SDRFPD, and other agencies as appropriate, and will be maintained throughout the life of the project. Iberdrola Renewables will educate the construction crew and maintenance employees as to potential dangers that may occur during construction and maintenance of the project. To reduce the possibility of fire ignition during hot work, Iberdrola Renewables will implement the Hot Work Procedure and coordinate with local fire authority regarding the specific conditions in the project area. The PDFs discussed in Section 3.6 will minimize the risk of ignition sources; therefore, the project's contribution to this impact is less than cumulatively considerable.	Prior to Construction	BLM	Prepare a Fire and Emergency Protection Services Agreement for the project.			
APM TULE-PDF-9	The 34.5 kV overhead collector lines as well as the 138 kV transmission lines will be designed in accordance with CPUC GO 95 "Rules For Overhead Electric Line Construction" and the current edition of the NESC to ensure sufficient clearance between conductors and vegetation to prevent contact. For example, the 138kV transmission line will have a minimum clearance from the conductor to the ground of 30 feet and the 34.5 kV overhead collector lines will have a minimum of 18.5 feet. Although, IBR's standard practice is to place the lines at a greater distance apart (e.g., 25 feet). Based on regular visual inspections, vegetation removal and management will be conducted below the lines to ensure this clearance is maintained.	Prior to Construction	BLM	Overhead collector lines and transmission lines designed in accordance with CPUC GO 95 "Rules For Overhead Electric Line Construction" and the current edition of the NESC to ensure sufficient clearance between conductors and vegetation to prevent contact.			

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APM TULE-PDF-10	The area within the project substation, which will contain transformers, capacitors, and other electrical components, will be cleared of vegetation, graveled, and maintained vegetation free. In addition, a 5-foot wide area outside the substation fence will be cleared and graveled. A 15-foot diameter area around transformers located at turbine towers will be cleared and graveled. Additional fuel management will occur for a balance of 100 feet from the turbine base. No switching devices with moving parts (fused cutouts, switches, reclosers) will be located on the poles. This removes a potential ignition source from arcing. Equipment within the substation, including transformers, will be protected in compliance with NFPA 850 and the CFC. Firefighting foam concentrate will be required at the substation location in the event of an oil fire.	During Construction and Operation	County of San Diego and BLM	• Clear vegetation within limits of substation. • Establish a 5-foot wide area outside of substation to be cleared and graveled. • Equipment within substation protected in compliance with NFPA 850 and the CFC. • Establish a 15-foot diameter area around transformers located at turbine towers and 100 feet of fuel management from the turbine base.			
APM TULE-PDF-11	The design of the power lines will comply with APLIC "Suggested Practices for Avian Protection on Power Lines" which is the industry standard developed to minimize avian contact with power lines. Bird caused flashovers are very unlikely for the project because the energized 138 kV conductors will have minimum distances of 30 vertical feet to the ground and 12 horizontal feet apart, and the 34.5 kV overhead collector lines will have a minimum distance of 18.5 feet vertical feet and 5 feet horizontal feet apart.	Prior to Construction.	County of San Diego and BLM	Project design shall demonstrate transmission lines comply with APLIC "Suggested Practices for Avian Protection on Power Lines"			
APM TULE-PDF-12	The lines and associated facilities will be designed in accordance with CPUC GO 95 "Rules for Overhead Electric Line Construction" and the current edition of the NESC to ensure the design minimizes the potential for inadvertent conductor contact.	Prior to Construction.	County of San Diego and BLM	Transmission facilities designed to conform to CPUC GO 95 "Rules for Overhead Electric Line Construction" and the current edition of the NESC			
APM TULE-PDF-13	Self-supporting steel poles will be utilized for the 138 kV transmission line. Steel and wood are being considered for 34.5 kV overhead collector system poles. If guy wires and anchors are used, they will be rated for a minimum of 150% of expected loading. This design approach eliminates the most likely cause of pole collapse, which is failure of a guy wire and/or anchor.	Prior to Construction	County of San Diego and BLM	Project design demonstrates guy wires are rated for a minimum of 150% of expected load.			
APM TULE-PDF-14	Periodic visual inspection of the 138 kV transmission line will occur and washing will occur on an "as needed" basis as determined by the visual inspections.	During Construction	County of San Diego and BLM	Complete periodic visual inspection and washing of the transmission line.			
APM TULE-PDF-15	Electrical collection and transmission system and turbines will include the required FAA and CAL FIRE lighting and markings.	Prior to Construction	County of San Diego and BLM	Project design demonstrates electrical collection and transmission system and turbines meet required FAA and CAL FIRE lighting and markings requirements.			
APM TULE-PDF-16	*Nacelle Fire Risk Reduction* 1. *Up-Tower* – Turbines with electrical (medium-voltage) equipment in the nacelle have a number of safety devices to detect electrical arc and smoke. For example, the turbine design being considered for the project include the following fire detection components that will be mounted on key power cables within the nacelle: • Smoke detectors; • Arc-flash sensors; • Over-current sensing transducers; and • Portable fire extinguishers. Should any of these devices register an out-of-range condition, the device immediately commands a shutdown of the turbine and will disengage it from the electrical collection system and send a notice through the SCADA system to the ECC in Portland, Oregon. The entire turbine is electrically protected by current-limiting switchgear that is installed inside the base of the tower. The project will be operated and maintained by approximately 12 permanent full-time employees, who will monitor the wind turbines during normal business hours.	Prior to Construction	BLM	Project design demonstrates measures have been incorporated as defined in APM TULE-PDF-16.			

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	In addition, Iberdrola Renewables' NCC in Portland, Oregon monitors and can control all of Iberdrola Renewables' wind turbines through the SCADA and is staffed 24 hours a day. Primary communications with the wind farm is via Telco T1 lines, and all plants have satellite backup capability. The NCC has the ability to control each turbine individually, as well as control the substation. Should any out-of-range issue occur at the project, the NCC will contact the sites' dedicated on-call person to deploy to the site to investigate and/or call emergency services if warranted by the type of out-of-range signal transmitted to the NCC. *Down-Tower* – This type of turbine being considered for the project has the electrical components installed in metal cabinets inside the base of the tower, and a low-voltage-to-medium-voltage transformer installed adjacent to the tower. In this configuration, the probability of an uncontained electrical fire in the nacelle is extremely remote, as there are no combustible materials inside the tower. However, this turbine style still has the same risk of a fire associated with electrical components as the Up-Tower style does. As with the other turbine type, a tower-based circuit breaker electrically protects the entire machine. This location will also have supervised smoke detectors. The potential for fire ignition in the nacelle due to blade over speed, wind or vibration is limited due to the design of the turbine blades, which are equipped with a pitch system that allows the blades to be rotated in order to control and stop the turbine in high wind conditions. As back-up to the three independent blade pitch systems, the turbines are equipped with a mechanical breaking system. In addition, turbines are equipped with vibrations sensors that automatically shut the turbines down if vibrations exceed the normal operating conditions. If fire ignition occurred within the Up-Tower or Down-Tower turbine type due to improperly installed electrical equipment, the fire protection and prevention features identified above would be triggered and the device that registered an out-of-range condition would immediately shutdown and an alarm would be indicated on the wind farm SCADA as well as on screens at Iberdrola Renewables' NCC in Portland, Oregon. In addition, signage will be posted at the NCC to call a 10 digit 24/7 landline phone number to emergency dispatch center in San Diego County in the case of an emergency.						
APM TULE-PDF-17	All wind turbine models being considered for this project will incorporate blade lightning protection systems. In general, these systems consist of air-receptors on various locations along the length of the blade, ground-conducting straps in the hub, nacelle, and tower, lightning detection tell-tale circuit cards, and tower grounding to earth. As mentioned earlier, Iberdrola Renewables has nearly 50 million operating hours on its U.S. fleet, and over that time lightning-induced fire has not occurred. To provide separation of installed equipment from combustible vegetation, gravel will be placed in and around substation, O&M building, wind turbines, and transformers. The project proposes up to a 200-foot cleared area around each turbine depending on the site topography at the time of construction. Upon completion of construction, with the exception of an area 60 feet in diameter (gravel up to a 10-foot radius to provide surface stabilization), the 200-foot cleared area would be revegetated with fire safe (non-combustible), low fuel vegetation, in a spacing and height configuration consistent with fire agency standard practices for a distance necessary to provide a minimum of 100 feet of fuel management from the turbine base and/or transformer. The impact analysis in the environmental document assumes a permanent impact to a 200-foot radius around each turbine. Fuel management would be performed annually prior to May 1 and more often as needed.	Prior to Construction	BLM	Project design demonstrates wind turbine models incorporate blade lighting protection systems as defined in APM TULE-PDF-17.			

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APM TULE-PDF-18	• No off-road vehicle use would be necessary because all wind turbine and associated project components (e.g., substation and O&M building) will be located in cleared areas. As part of the project design, existing access roads will be improved and new access roads are proposed that meet the requirements of the County of San Diego Consolidated Fire Code (2009) where they occur on County lands with the exception of spurs that serve turbines only. • Hot Work Procedure (PDF-1). • Construction, Operations, and Maintenance Fire Prevention/Protection Plan (PDF-2). • Road maintenance activities requiring the use of grading equipment will be suspended during red flag events. • Permanently assigned project vehicles will carry, as a minimum, a fire extinguisher, shovel, and two-way-radio.	During Construction and Operation	BLM	Utilize approved access roads during construction and maintenance operations.			
APM TULE-PDF-19	No vehicle will be idle or parked in areas of combustible fuels, such as brush or grass. All wind turbine and associated project components (e.g., substation and O&M building) are located in cleared areas. As part of the project design, existing access roads will be improved and new access roads are proposed.	During Construction and Operation	BLM	Vehicles will not idle or be parked in areas of combustible fuels.			
APM TULE-PDF-20	Portable equipment powered by two cycle engines or capable of producing significant exhaust heat will be located within the 200-foot radius surrounding the turbine in which vegetative fuel reduction will take place.	During Construction and Operation	BLM	Portable equipment capable of producing significant exhaust heat will be placed within 200 feet of turbines.			
APM TULE-PDF-21	Work on energized equipment will be avoided whenever possible. Personnel performing work on energized equipment will be trained in applicable OSHA and other safety requirements.	During Construction and Operation	BLM	Minimize work on energized equipment.			
APM TULE-PDF-22	Smoking is limited to cleared areas around the O&M building.	Operation	BLM	Limit smoking to cleared areas around the O&M building.			
APM TULE-PDF-23	As part of the project design, existing access roads will be improved and new access roads are proposed that meet the requirements of the County of San Diego Consolidated Fire Code (2009) where they occur on County lands with the exception of spurs that serve turbines only. These improvements will have the effect of decreasing fire response times to the project area and general area, in the event of a fire or other emergency. The proposed access road improvements will also improve public safety should a vegetation fire occur in the area by providing alternate routes of egress. Currently the only public exit road from the McCain Valley area is McCain Valley Road. The proposed connector road between Ribbonwood and McCain Valley Road is proposed as a private road; however, it will not be gated. As a result, this road will be available to the community in the event of an emergency. This road will be improved to meet County of San Diego private road standards. Additionally, the turbine roads will improve access allowing fire crews and tanker trucks faster initial response in the project area. Fire and other emergency vehicles will also be able to utilize the access roads to improve response times to remote areas. BLM roads or turbine roads that are proposed to be gated shall be provided with an approved Knox Box as discussed in Section 5.1 [of the Tule Wind Applicant's Environmental Document].	Prior to Construction	BLM	Project design demonstrates access roads have been designed in accordance with APM TULE-PDF-23.			
APM TULE-PDF-24	The O&M facility is the only new structure proposed that will include Iberdrola Renewables staff during business hours. The O&M building will include the PDF that provide fire prevention and protection. • The facility construction, including walls, penetrations through walls, doors, vents, roof, glazing and any skylights, will comply with the County Building	Prior to Construction	BLM	Project design demonstrates O&M facility is designed to provide fire prevention and protection as defined in APM TULE-PDF-24.			

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Code (CBC) Wildland Urban Interface construction standards in Section 92.1.704, and Chapter 7-A of the CBC, and the CFC. • The O&M building will be located on a 5-acre site including a parking lot and will be surrounded by a 4-acre cleared area. The substation facility will have the required 3-acre graveled fenced cleared area around it and will have adequate spacing from transformers and other potential fire sources. The project will provide a minimum of 100 feet of fuel management. • Any batteries would comply with the requirements in the CFC and would have secondary containment and required ventilation to prevent buildup of hydrogen gas. • Various occupancies in the building, as classified by the CBC, will have the required fire separations and will comply with the CFC and CBC for the type of occupancy and activities therein; for example, storage, or maintenance shop. • Sprinklers with exception of control room, which may have an alternative suppression system. Fire Sprinkler system will be supervised by Iberdrola Renewables' Portland Control center and to the off-site 24/7 alarm monitoring company. Determination will be made by Iberdrola Renewables as to supervision by the alarm monitoring company. Supervision to a Fire District approved remote alarm monitoring company required based on number of sprinkler heads. Twenty heads requires electrical supervision of all valves in system, pumps, water tank level, etc. CFC Section 903.4. • The SCADA monitoring system will have emergency power source at the O&M building, in addition to 24/7 monitoring at the NCC. Both Iberdrola Renewable's on-site staff and staff at the NCC will have the emergency contact information for the fire agencies, and will coordinate to make sure that the fire agencies will be called in the event of a fire or medical emergency. • The control room will be separated from remainder of building by 1-hour fire rated walls for fire safety and will have exterior exits. • The building will have smoke detectors, which are supervised in control room, activate an alarm on exterior of building, and are supervised to the NCC. Alarms may not be transmitted to the off-site 24/7 alarm monitoring company, so as to avoid false calls to 911 resulting in an unnecessary response. • The building will have a KNOX key box on exterior by main door for use by firefighters. Per the requirements of PRC 4291, *Reduction of Fire Hazards Around Buildings*, the project will provide 100 feet of fuel modification around all buildings, and is the primary mechanism for conducting fire prevention activities on property within CAL FIRE jurisdiction. In addition, Iberdrola Renewables will implement a brush management plan at its project O&M facility, turbine pads, and substation. This plan will be consistent with the following County Consolidated Fire Code: • Under the County Consolidated Fire Code, brush is to be modified within 100 feet (31 meters) of structures in radius, called defensible space (Section 4707.2a). There are two zones to be aware of when creating a defensible space for fire mitigation. • Zone 1, From structure out to a minimum of 50 feet: "The area within 50 feet (15 meters) of a building or structure shall be cleared of vegetation that is not fire resistant and/or replanted with fire-resistant plants" (County Fire Code Section 4707.2a). • Zone 2, Between 50 to 100 feet from structures: "In the area between 50 to 100 feet (15 to 31 meters) from a building all dead and dying vegetation shall						

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	be removed. Native vegetation may remain in this area provided that the vegetation is modified so that combustible vegetation does not occupy more than 50 percent of the square footage of this area" (County Fire Code, Section 4707.2a).						
APM TULE-PDF-25	Transformers contain cooling oil, which can be ignited by an electrical arc. NFPA 850, including Section 10.5.2.6, provides recommendations for transformer protection. These recommendations will be followed. Transformers associated with the substation will be located approximately 50 feet from the O&M building and will be surrounded by a minimum of 100 feet of fuel management. The substation is proposed to be located adjacent to the O&M building on a 5-acre parcel and will be surrounded by a 3-acre graveled parcel providing a minimum of 100 feet of fuel management around the substation. Transformers will utilize fire walls for exposure protection and will have secondary containment to control any oil that could be released. The size of the containment must be adequate to contain the total amount of oil plus firefighting water for 15 minutes. NFPA 850 recommends 10 minutes however, per NFPA 11, foam delivery from hand lines assumes an application time frame of 15 minutes. Firefighting foam concentrate will be stored at substation for use by firefighters. Typically, a 3% Aqueous Film Forming Foam (AFFF) concentrate is used, and the application rate is 0.16 gpm/sq. ft. for 15 minutes from a firefighter hose line. In concept, the needed gpm flow rate for the hose lines is 250 gpm. This is subject to detailed design and size of the containment. Fire resistant oils can also be used if they do not contain polychlorinated biphenyls (PCBs) or other toxic materials. Prior to operations of the facility, actual design of the transformer fire protection measures will be determined by Iberdrola Renewables and submitted to SDRFPD and SDCFA for approval.	Prior to Construction	BLM and County of San Diego	Project design demonstrates transformers comply with NFPA 850 and measures as defined in APM TULE-PDF-25.			
APM TULE-PDF-26	Prevention and minimization of fire risk is a primary concern for Iberdrola Renewables. Other typical best management practices related to combustible storage that will be implemented on the project site include: • Minimizing accumulation of combustible material, only allow storage of flammable materials in fire rated cabinets, ensure all combustible waste material is collected and disposed of properly including the storage of oily rags in approved containers, maintain a list of potential fire hazards at the plant including how sources of ignition will be controlled for each of these potential hazards. • Perform periodic housekeeping inspections to find and mitigate any fire hazards found, ensure employees and sub-contractors are trained in fire prevention, and ensure employees are trained in the use of fire extinguishers. • Combustible storage and trash on site during construction and operation phases will be properly stored in a clear area with fuel modification around it, and be away from turbines and the substation. Such storage will be orderly and be removed from the site as soon as possible.	During Construction and Operation	BLM	Implement best management practices to minimize fire risk as defined in APM TULE-PDF-26.			
MM FF-1	**Develop and Implement a Construction Fire Prevention/Protection Plan.** Tule Wind, LLC shall develop a multiagency Construction Fire Prevention/Protection Plan in consultation with and to the satisfaction of CAL FIRE, SDRFPD, and SDCFA. Tule Wind, LLC shall monitor construction activities to ensure implementation and effectiveness of the plan. The final plan will be approved by the commenting agencies prior to the initiation of construction activities by Tule Wind, LLC At minimum, the plan will include the following: • Procedures for minimizing potential ignition	Prior to Construction	BLM	Develop and implement a Construction Fire Prevention/Protection Plan as described in MM FF-1.			

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o vegetation clearing o fuel modification establishment o parking requirements o smoking restrictions o hot work restrictions • Red Flag Warning restrictions • Fire coordinator role and responsibility • Fire suppression equipment on site at all times work is occurring • Requirements of Title 14 of the CCR, Article 8 #918 “Fire Protection” for private land portions • Access Road widening (28-foot County roads, 18-foot-wide spur roads) • Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009) • Emergency response and reporting procedures • Emergency contact information • Worker education materials; kick-off and tailgate meeting schedules • Other information as provided by CAL FIRE, Rural Fire Protection District, SDCFA, BLM, California State Land Commission (CSLC), BIA, and Ewiiaapaayp Band of Kumeyaay Indians, San Diego County Additional restrictions will include the following: • During the construction phase of the project, Tule Wind, LLC shall implement ongoing fire patrols. Tule Wind, LLC shall maintain fire patrols during construction hours and for 1 hour after end of daily construction and hotwork. • Fire Suppression Resource Inventory – In addition to 14 CCR 918.1(a), (b), and (c), Tule Wind, LLC shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the Rural Fire Protection District, SDCFA, and CAL FIRE • During Red Flag Warning events, as issued daily by the National Weather Service in SRAs and LRAs, and when the USFS Project Activity Level is Very High on Cleveland National Forest (as appropriate), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under a Hot Work Procedure (see APM TULE-PDF-1). Tule Wind, LLC and contractor personnel shall be informed of changes to the Red Flag event status and Project Activity Level as stipulated by CAL FIRE and Cleveland National Forest. • All construction crews and inspectors shall be provided with radio and cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area immediately upon ignition. • Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crewmembers as needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect. • Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100 yards of a vehicle containing equipment necessary for fire suppression						

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	as outlined in the final Construction Fire Prevention/Protection Plan. • Water storage tanks (APM TULE-PDF-7) shall be installed and operational at the time of start of construction, except where construction of new access roads is necessary to reach the SDRFPD's preferred location for the water tank, in which case the water tank will be installed along with access road construction. Tule Wind, LLC will provide a draft copy of the Construction Fire Prevention/Protection Plan to CAL FIRE, SDRFPD, and SDCFA for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to Tule Wind, LLC and revisions to the plan will address each comment to the satisfaction of the commenting agency. The final plan will be approved by CAL FIRE, SDRFPD, and SDCFA with input from the BLM, County of San Diego, California State Lands Commission, BIA, and Ewiiaapaayp Band of Kumeyaay Indians, as desired, prior to the initiation of construction activities and provided to the Tule Wind, LLC for implementation during all construction prior to the initiation of construction activities. All construction work on the Tule Wind Project shall follow the Construction Fire Prevention/Protection Plan guidelines and commitments.						
MM FF-2	**Revise Existing Wildland Fire Prevention and Fire Safety Electric Standard Practice Plan (2009) to Create the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational Maintenance Plan.** The revised plan will address the Tule Wind Project and will be implemented during all operational maintenance work associated with the project for the life of the project. Important fire safety concepts that will be included in this document are as follows: • Guidance on where maintenance activities may occur (non-vegetated areas, cleared access roads, and work pads that are approved as part of the project design plans) • Fuel modification buffers required by the FPP • When vegetation work will occur (prior to any other work activity) • Timing of vegetation clearance work to reduce likelihood of ignition and or fire spread • Coordination procedures with fire authority • Integration of the project's Construction Fire Prevention/Protection Plan content • Personnel training and fire suppression equipment. Prior to energizing the Tule Wind Project, Tule Wind, LLC will install a skid-mounted Type VI firefighting unit with at least 100 gallons water capacity and a pump rate of approximately 25-30 gallons per minute into two of its operations and maintenance pick-up trucks. In addition, also prior to energizing the Tule Wind Project, Tule Wind, LLC personnel will undergo training by SDRFPD personnel, or another entity certified to conduct such training, on the proper use of Type VI firefighting equipment to fight incipient fires. • Red Flag Warning restrictions for operational maintenance work • Fire safety coordinator role as manager of fire prevention and protection procedures, coordinator with fire authority and educator • Communication protocols • Incorporation of CAL FIRE, San Diego Rural Fire Protection District, and SDCFA reviewed and approved Response Plan mapping and assessment. • Other information as provided by CAL FIRE, San Diego Rural Fire Protection District, SDCFA, BLM, CSLC, BIA, Ewiiaapaayp Band of Kumeyaay Indians, and USFS. Tule Wind, LLC will provide a draft copy of the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational Maintenance Plan to the agencies listed previously for comment a minimum of 90 days prior to the start of any	Prior to Construction	BLM	Revise the 2009 plan and implement the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operation Maintenance Plan according to MM FF-2.			

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				Compliance Action	*Initials*	*Date*	*Remarks*
	construction activities. The comments will be provided back to Tule Wind, LLC and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be approved by the commenting agencies prior to energizing the project and provided to Tule Wind, LLC for implementation during all operational maintenance activities.						
MM FF-3	**Provide Assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA).** Through a development agreement with SDRFPD and SDCFA, Tule Wind, LLC will provide funding for the training and acquisition of necessary firefighting equipment and services to SDRFPD/SDCFA to improve the response and firefighting effectiveness near wind turbines, electrical transmission lines, and aerial infrastructure based on project fire protection needs. Funding would be provided through a Development Agreement with SDRFPA and SDCFA Assistance by Tule Wind, LLC shall provide funding for one SDCFA Fire Code Specialist II position to enforce existing fire code requirements, including but not limited to implementing required fuel management requirements (e.g., defensible space), in priority areas to be identified by the SDCFA for the life of the project. All fuel management activities shall be in accordance with CEQA Guidelines Section 15304 (i), which indicates that the minor land alternation activities will not have a significant effect on the environment, as the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. In addition, Tule Wind, LLC is to provide funding to allow SDCFA to employ up to four volunteer/reserve firefighters as part-time code inspectors on a stipend basis for up to 90 days per year for the life of the project. The funding for the SDCFA Fire Code Specialist II position and the four volunteer/reserve firefighters as part-time code inspectors will be provided through proportional contributions, to be determined by the CPUC and BLM, from Tule Wind, LLC (and the other applicants) to the SDCFA prior to construction.	Prior to Construction	BLM	Prepare development agreement with SDRFPD and SDCFA to provide necessary assistance.			
MM FF-4	**Customized Fire Protection Plan for Project.** A draft Fire Protection Plan will be submitted to SDRFPD and SDCFA at least 90 days before the start of any construction activities. Comments on the draft FPPs shall be provided to the Tule Wind, LLC and the Tule Wind, LLC shall resolve each comment in consultation with SDRFPD and SDCFA. The final FPP shall be approved prior to the initiation of construction activities. The FPP will include, at minimum, the following: • San Diego County FPP Content Requirements (http://www.sdcounty.ca.gov/dplu/docs/Fire-Report-Format.pdf) • Rural Fire Protection District Content Requirements o Provisions for fire safety and prevention o Water supply o Fire suppression/detection systems – built-in detection system with notification o Secondary containment o Site security and access o Emergency shut-down provisions o Fuel modification plan o Access road widths and surfacing o Emergency drill participation. • Emergency evacuation plan • Integration into plans created to satisfy Mitigation Measures FF-1 and FF-2. The Tule Wind Project FPP will be incorporated into MM FF-1, the Construction Fire Prevention/Protection Plan, and MM FF-2, the Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009) Operational Maintenance Plan. The Customized Fire Protection Plan will incorporate clarifications and additional Tule	Prior to Construction	BLM, SDRFPD, SDCFA	Prepare and implement a customized Fire Protection Plan.			

Applicant Proposed Measure (APM)/Mitigation Measure (MM)		Timing for Implementation	Monitoring Agency(s)	Verification of Compliance			
				Compliance Action	*Initials*	*Date*	*Remarks*
	Wind Project APMs described in Section B of this EIR/EIS. The Final FPP for the Tule Wind Project is to be approved by SDRFPD and SDCFA prior to initiation of construction. The current FPP for the Tule Wind Project is available on the CPUC website: http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/ECOSUB.htm.						
MM FF-5	**Wind Turbine Generator Fire Protection Systems.** Fire detection, warning, and suppression systems for each wind turbine generator will include modern technology and will address, at minimum, the following: • Use of non-combustible or difficult to ignite materials • Early fire detection and warning systems • Maintenance according to manufacturer specification • Auto switch-off and complete disconnection from the power supply system • Ongoing hazard/fire safety training for staff • Automatic fire extinguishing systems in the nacelle of each wind turbine (stationary, inert gas, or similar). Tule Wind, LLC will implement this technology through the wind turbine manufacturer or an aftermarket supplier. • Non-combustible or high flash point lubricant oils.	Prior to/During Construction	BLM	Develop wind turbine generator fire protection systems.			
MM FF-6	**Funding for FireSafe Council.** Provide funding for Boulevard/Jacumba/La Posta FireSafe Council with a clarified focus of coordinating a Community Wildfire Protection Plan (CWPP) and Evacuation Plan. Funding for the Boulevard/Jacumba/La Posta FireSafe Council will enable this newly formed organization a means to proactively complete these plans, provisions for applying for grant funding, and ultimately, for implementing fuel reduction and evacuation plans. Funding will be a lump sum, one-time amount with Tule Wind, LLC providing fair share of CWPP and evacuation plan preparation.	Prior to Construction	BLM	Provide a one-time lump sum payment to fund a Boulevard/Jacumba/La Posta FireSafe Council.			
MM FF-7	**Preparation of Disturbed Area Revegetation Plan.** All areas disturbed during construction activities that will not be continuously included in the long-term maintenance access ROW will be provided native plant restoration in order to prevent non-native, weedy plants from establishing. Disturbed areas that will be included in the long-term maintenance program will not be revegetated as any plants that establish in these areas will be removed on an ongoing (at least annual) basis. Mitigation Measure FF-7 corresponds with Mitigation Measure Bio-1d and is not a duplicative plan but will be implemented under the biological monitoring program. It directs that the temporary disturbance areas will be revegetated with native plants common to the area through direction detailed in a Habitat Restoration Plan. The Habitat Restoration Plan will be prepared to restore native habitat and to reduce the potential for non-native plant establishment. The restoration plan will incorporate a Noxious Weeds and Invasive Species Control Plan to assist in restoring the construction area to the prior vegetated state and lessen the possibility of establishment of non-native, flammable plant species. A copy of the Revegetation Plan will be provided to the BLM and San Diego County. In addition, prior to the termination of the ROW authorization, a decommissioning plan will be developed and approved by the BLM and other agencies having jurisdiction. The decommissioning plan will include a site reclamation plan and monitoring program. As the wind facility is removed from the site, topsoil from all decommissioning activities will be salvaged and reapplied during final reclamation. All areas of disturbed soil will be reclaimed to native habitat conditions found naturally in the area.	Prior to Construction	BLM	Prepare and implement Disturbed Area Revegetation Plan as defined in MM FF-7.			